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ADDRESS IN STATE MEDICINE.

RECENT ADVANCES IN STATE MEDICINE.

The Annual Address by the Chairman of the Section on State Medicine, Delivered at the Thirty-ninth Annual Meeting of the American Medical Association, May, 1888.

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The By-laws of this Association require that "The Chairman of each Section shall prepare an address on the recent advancement in the Branches belonging to his Section." Thus the subject of this address is fixed; yet, most of us are too busily occupied with professional or official duties to study carefully all of such work reported in all parts of the world, especially as the field in State Medicine is so very extensive, depending upon, and utilizing, as it does, the progress in most of the medical and allied sciences. One must have a very broad view, much leisure, a good knowledge of several languages, and be familiar with the requirements of practical sanitary work, in order to summarize fully the "recent advancement in the Branches belonging to" this Section. I cannot hope to accomplish so much, and, if I could, you could not listen to it in forty minutes.[1] but I shall do the best I can in the time at my disposal to place before the Section a summary of those recent advances in State Medicine which have attracted my attention and have impressed me as useful for our encouragement, for the suggestion of errors or obstructions to be avoided, or of new methods or combinations of facts useful for our progress.

GENERAL PRINCIPLES UNDERLYING USEFULNESS OF STATE MEDICINE.

Sanitarians are not so much nuisance abaters as formerly were the hygienists; and they are more disease-preventers. In the public-health service generally, methods are coming to be more instructive, and less dogmatic and mandatory. Such opposition as that of Herbert Spencer, to boards of health constituted according to the old ideal, does not at all apply to State Boards of Health constituted on the modern plan which makes their chief functions the collection, collation and dissemination of facts which teach the causation of disease, the best means for avoiding and preventing sickness and deaths, and which facts are from sources so extensive as to be entirely beyond the reach of individuals, but which the people as a whole, through their governmental representatives, can easily collect, collate, and place before all classes of people, to be utilized by such as are sufficiently intelligent.

Modern methods of sanitation are thus in harmony with the law of "the survival of the fittest," if we consider, as I do, that the most intelligent classes, who obey the teachings of sanitary science are best fitted to survive.

Any narrow selfishness, however, which might be engendered in one of this most intelligent class, by dwelling upon the idea that "I am holier than thou," is soon dispelled when he comes to see that no man lives entirely to himself alone; not only is each person to some extent his brother's keeper, but he is dependent on all about him for immunity from dangerous communicable disease, and for safety of life and health in various ways.

The highest selfish interests thus join with the highest benevolence in favor of the widest possible diffusion of sanitary knowledge, and of the most complete obedience to sanitary precepts, ordinances and laws.

INCREASE OF THE PUBLIC-HEALTH SERVICE, AND OF SANITARY PUBLICATIONS.

An important factor in sanitary progress is the increase in the number of persons who enter, more or less permanently, upon some branch of sanitary work. In many of our States such increase is very great. For instance, in Michigan when the State Board of Health was organized, in 1873, there was hardly an active local board of health in the State; very few local health officers were appointed; while for the year 1887–88 over thirteen hundred local health officers were appointed in the State, and many of them physicians who devote considerable time to the work.

The increase in the numbers of our people who live in the cities and villages, the improvements in plumbing and other sanitary appliances, the increasing tendency toward sanitary inspections

[1] The time allowed. Jour. Am. Med. Assoc., June 25, 1887, p. 715.

of such appliances, with the increased number of health officers and sanitary officials, and the greatly increased public interest in sanitary affairs, has built up a class of sanitary and trade journals, which do much for sanitary progress. Many physicians are now or have been health officers. For this, and other reasons, the medical journals seem to contain an increasing proportion of literature bearing upon sanitary administration, and other branches of State Medicine.

But the most important factor tending to increase the demand for sanitary literature is the work of the boards of health themselves, and especially that part of their work which consists in spreading among the people, in popular pamphlet form, the existing knowledge applicable to the restriction and prevention of the most dangerous diseases, including the relations of low ground-water and of contaminated water to typhoid fever, and similar information of immediate practical utility. This work is productive of immediate good in the reduction of the sickness and mortality from such dangerous diseases; and it stimulates a general desire among the people for more knowledge on such vital subjects.

The apparent popular demand for sanitary literature is being met by several of the State Boards of Health, by the publication of a monthly journal which serves as the organ of the State Board which issues it, and as a convenient means of regular communication between the office of the Board and the health officers and others throughout the State who are interested in public-health work. Such a journal is now published in Minnesota, Maine, Pennsylvania, Tennessee, Ohio, Iowa, and perhaps other States. In some of the States the proceedings of the State Board are published quarterly, and distributed quite generally within the State.

ORGANIZATION.

The increased number of persons in the public-health service, with the growing general interest in their work, prompts organization for comparison of methods of work, for coöperation wherever practicable, and for the general promotion of sanitary affairs.

In some of the States this tendency has led to the formation of Sanitary Associations, consisting mostly of physicians and others of the leading thinking classes. The Ohio State Sanitary Association is a notable example; but Associations have been formed in other States. The principle involved is not quite the same as in the "Associations of Medical Officers of Health," in England and in the Province of Ontario; but inclines more toward the popularization of sanitary information and measures among the people generally than toward the advancement of the knowledge of the medical officers of health. The assumption (which is probably correct) seems to be that the medical officers of health are now in advance of the people, and do not, so much as the people generally, need to advance their knowledge of sanitary science or of sanitary administration. However, under the system of free and general distribution of the best that is known, by State Boards of Health, it would seem that the time is near, when, throughout this country Associations of medical officers of health need to be formed, for their own advancement, and for the best interests of sanitary progress.

In Michigan, and some other States, although local Sanitary Associations have been formed, sanitary conventions have, thus far, been the principal method of popularizing sanitary measures. The topics chosen have reference to the the greatest apparent needs of the locality in which the convention is held, such, for instance, as the present methods of disposing of excreta and waste products, and the present source and condition of the water-supply of the city or village, including the exact relations of privy-vaults to wells in the principal business part, and the principal residence portion of the place, and the explanation of the best means for restricting the most dangerous communicable diseases.

These practical questions of vital importance can be so presented by members of State Boards of Health, by leading physicians, lawyers and ministers, and so impressed upon the people of almost any community that thereafter much greater attention will be given to affairs which relate to the public health.

THE NATIONAL CONFERENCE OF STATE BOARDS OF HEALTH.

The increasing intelligence of the people is now tending to stimulate progress by those who aim to lead the people in State Medicine. The most notable organization of this nature within recent years is the Conference of State Boards of Health, a National Association of delegates from State Boards, but having international tendencies, as shown by the fact that it includes delegates from the Provinces of Canada. It has had its fifth annual meeting in Cincinnati, just preceding this meeting of the American Medical Association. It does not supplant the older American Public Health Association, which aims at the popularization of sanitation, and for the advancement of sanitary science, but its work differs from both these functions of the older Association, being largely concerned with the practical questions of official public-health work, and its membership is restricted to officers who represent those who can put in force the conclusions reached by the conference. It is a league which, to some extent, serves to unify the Public-health Service of the United States, and might be utilized in the same direction to a much greater

extent by the United States Government, to supply the lamentable loss of our National Board of Health, or to coöperate with a National Bureau of Health, or with a National Board of Health, should the present Board, or a new one be granted an appropriation.

LEGISLATION: LOCAL, STATE, NATIONAL.

Sanitary laws are commonly supposed to have two functions: if properly published and enforced, they are educational; and they may be enforced in cases where no other course will secure obedience to sanitary precepts. But sanitary laws have other functions. A new general principle of sanitation, before suggested, is important especially in connection with sanitary legislation. According to this general principle of action it would seem that for the interests of sanitary progress, the most important legislation is that which provides for the collection of facts, not only those upon which to base immediate action, but also those out of which to construct sanitary science, that which provides also for the comparison and study of those facts by persons especially qualified for that service, and for the publication of the results of such statistical and other researches for the benefit of all classes of people. The facts necessary for immediate action are as imperatively needed as is the knowledge of the location of a burning building, and for much the same reason—in order that the danger may at once be averted. And, as in the case of a dangerous communicable disease, life and health as well as property are at risk, any ordinary pecuniary interest of the individual should yield to the high moral duty to the public safety, and await recompense from the public. Therefore I agree with Dr. Rohé, our chairman last year, who said: "The *first* requirement then in dealing with infectious diseases from a 'State Medicine point of view' is *notification*, and inasmuch as such notification will never be effected if voluntary, it must be made compulsory.

"The *second* requirement in restricting the prevalence of such diseases is the segregation of patients, and guarding healthy individuals except the immediate attendents, from contact with them.

"The *third* requirement is prompt and thorough disinfection, in other words, the absolute destruction of the infective properties of infectious matter, in whatever that may consist.

"I would therefore declare the watchwords, of the practical and progressive sanitarian in dealing with communicable diseases, to be these three: *Notification*, *Isolation*, *Disinfection*."

There seems to be progress in the first essential (notification) in many parts of the country. In England the area of country coming under that law is increasing, and it is proposed by the local government board[2] to extend the system of compulsory notification, and perhaps to make the law general, although in that country there has been opposition by some of the medical profession. In Michigan notification of dangerous diseases is compulsory upon householders and physicians, and physicians are allowed a very small fee (ten cents) for each case reported. Only small-pox, diphtheria, and scarlet fever are specifically mentioned in the law, but several other diseases including typhoid fever, and rötheln, have been declared to be "diseases dangerous to the public health." Increasing attention to this subject is noticeable in Michigan, in Wisconsin[3], in Minnesota, in Maine,[3] in Iowa,[3] in Indiana,[4] in Kentucky.[4] In New Hampshire, also, a law has been enacted requiring physicians to report all cases of diphtheria and scarlet fever to the local board of health.[5]

STATE LEGISLATION: PROTECTING THE PURITY OF INLAND WATERS.

The last general court of Massachusetts made an appropriation of $30,000 for the use of the State Board of Health in protecting the "purity of inland waters." "It was thought wise to begin with the largest and most important supplies." . . . "From time to time other water supplies have been examined in this exhaustive manner." . . . "Four rivers in the State have been systematically examined." The results of these examinations are given in the report of that State Board, made January, 1888. The Board has established an experiment station, to determine the amount of sewage that can, in that climate, be purified by application to different soils.

LEGISLATION: NATIONAL.

That the United States Government pays less attention to those highest earthly interests of its citizens—human health, and life itself—than other governments, and even less attention than it gives to the protection of the swine and other domestic animals, is a cause for regret and shame to all intelligent citizens, and especially to physicians, because their attention is so frequently called to the subject, and because they realize how much might be done for the prevention of epidemics, and, more especially, of the sickness and deaths from the most common causes.

As usual, there is now before Congress a bill for a National Health Service.

WHAT PREVENTS NATIONAL LEGISLATION IN THE INTERESTS OF PUBLIC HEALTH.

A brief review of some of the efforts of physicians and Associations may aid to a clearer understanding of the situation.

Fifteen years ago in this same City of Cincin-

[2] Circular issued Dec. 5, 1887. Published in "City of York, Report on the Compulsory Notification of Infectious Diseases, York, Eng."
[3] Sanitary News, Jan. 28, 1888.
[4] Sanitary News, Feb. 4, 1888.
[5] Sanitary News, Feb. 11, 1888.

nati, May 1, 1873, I listened to a report to the American Public Health Association made by C. C. Cox, M.D., LL.D., of Washington, on "The Necessity for a National Sanitary Bureau." The report, and the "Bill to establish a Bureau of Sanitary Science" which had already been presented to the U. S. Senate, are published in Vol. 1, pp. 522–532 of the Transactions of that Association.[6]

Dr. Cox said: "Regarding the continually increasing sanitary wants of our country . . . it occurred to me that our government should advance among the first to conserve the health of its population, and avert the disasters which menace it. With this view I prepared, in 1871, the plan of a National Bureau of Health. This was subsequently submitted, as you are aware, at a meeting of the sanitarians, representing the different sections of the country, assembled at New York, and endorsed by them in a series of commendatory resolutions."

After the reading of the report by Dr. Cox, the American Public Health Association adopted a resolution "that in the judgment of this Association, the establishment of a National Sanitary Bureau, with relations to the general government similar to those of the Bureaus of Agriculture and Education, is highly desirable as a means of promoting sanitary science and the protection of the public health."[6]

November 14, 1873, at the meeting of the American Public Health Association in New York, resolutions presented by myself were adopted,[7] favoring the project, and for the appointment of a committee representing, so far as practicable, each State in the Union, to memorialize Congress, and to coöoperate with a similar committee or "section" of the American Medical Association. Through the belief of the President of the Health Association and others that the time was not favorable, the effort was not vigorous, and it was unsuccessful at that time.

November, 1878, at a meeting of the American Public Health Association in Richmond, Va., I again presented resolutions outlining proposed duties of a permanent U. S. Health Commission, proposing a committee of the Association to memorialize Congress for the establishment of the Commission, and for the appointment of a standing committee on Public Health in each legislative branch of the U. S. Government. The yellow fever epidemic of that year emphasized the need for some action by our government. The Association committee was appointed, nearly every State being represented upon it. Dr. Billings, of Washington, was especially active. Hon. J. H. McGowan, a member of Congress from Michigan, was induced to confer with Dr. Billings, introduce a bill, and labor for its passage. The National Board of Health was thus established. For a few years it did excellent work, which was commended by the leading sanitary associations in this country. It had the respect and confidence of nearly every sanitary authority in this country; but, from the first, it had the determined opposition of a few who were in office and power in Washington, and who were eventually able to cripple and finally to defeat appropriations for it by Congress. The distinguished sanitarians who were its first members dropped out, and to-day the Board exists only in name.

In a recent number of the *New York Medical Journal*[8] is an editorial entitled "The Marine Hospital Service and the Proposed National Bureau of Health," in which is an account of the arguments recently before a committee of Congress for and against the proposed legislation. The arguments for it were mainly by the President of the National Conference of State Boards of Health, and by three ex-presidents of the American Public Health Association, a committee representing the principal sanitarians and sanitary organizations of this country. The only opponent mentioned was Dr. Hamilton, of the Marine Hospital Service, who "submitted a brief." The editorial says: "Under one form or another, the old National Board of Health has been sought to be revived on several occasions, and each time Dr. Hamilton has had to oppose the attempt almost single-handed."

Officers in the medical departments of the army and navy, on the other hand, have favored the National Board of Health or other public health legislation; but it is much easier to prevent than to obtain appropriations.

FOR WHAT PURPOSE ARE WE HERE?

In order to fulfil the duties assigned to me, I have studied again the apparent intention of the founders of this Section, and of those who have contributed to its maintenance. It would seem that there has been and is in the medical profession a profound desire to promote the general welfare by utilizing for the public good those vast stores of scientific and practical information gained by the medical profession, which, although not of much use in the *treatment* of disease, are capable of a much more important service in the *prevention* of disease. I think there is a growing belief that there is a higher plane than even the exalted one on which the medical practitioner has long stood, and that if quite a large proportion of the medical profession were employed and paid for their efforts for the prevention of disease, their relations to the people would be of the noblest kind. The methods which tend in this direction are those which seem to have actuated the founders of this Section—those which favor the formation of State and other Boards of Health, and (as the

[6] Pub. Health: Trans. of Am. Pub. Health Ass'n, vol. II, p. 537.
[7] Page 543, vol. II, Pub. Health: Trans. Am. Pub. Health Ass'n.
[8] March 24, 1888.

name of the Section, "State Medicine," implies) build up the legal organizations, local, State, and National, through which only can the public reap the results of the progress in sanitary science.

But those of us who have watched the progress of this Section know that although the Section has almost uniformly held back from recommending specific legislation, sometimes even discouraged attempts at public health legislation, it has always favored that other essential to progress in this direction, the building up of a sound sanitary science for the use of the State, whenever the State shall become sufficiently intelligent to utilize it.

Nearly all the papers and discussions before this Section are expected to contribute to this scientific branch of our work; therefore, if numerous important lines of work in the sanitary sciences, during the past year, are not mentioned in this address, they are likely to be brought out during this meeting, especially those relating to the topics especially chosen, "Malaria and the Causation of Fevers." There has been considerable progress in the knowledge of the causation of fevers, but a satisfactory mention of the lines of work would take too much of the time allotted to this address.

DEVELOPMENT OF THE GERM THEORY OF DISEASE.

Progress seems to be in waves, and greatest along certain lines. Recently many have been engaged in investigation and experiment in developing the germ theory of disease. Great progress has been made, considering that it has been largely the contributions of individuals; for as a rule those for whom this work is most valuable—the common people themselves—have not yet awakened to the importance of such work so as to demand of their representatives that it shall be maintained by the governments. The Imperial Government of Germany has wisely maintained the laboratory in which Dr. Koch's great contributions to science have been taught to large numbers from many countries. In this country the General Government has done little worthy of special notice, but individual officers, in several branches of the U. S. Service, have contributed much toward progress in this direction, notably Dr. Sternberg, of the Army Medical Department.

A writer in *Science*[9] has lately published results of an inquiry by circular, addressed to each of the medical schools in this country, asking questions concerning the germ theory, and what is being done about it. Replies were received from those colleges in which the greatest number of students is taught. He concludes that quite a number of bacteriological laboratories have been established in connection with our larger medical schools. They are under the charge of competent directors, and are places where original research is being carried on, and where students have an opportunity to familiarize themselves with the subject in a practical manner. American medical schools are thus doing their share in this research in this manner, and the endeavor to advance our knowledge of bacteria and their relation to disease.[10]

In Baltimore there is a well-equipped bacteriological laboratory under the direction of the Professor of Pathology of the Johns Hopkins University. In Brooklyn,[11] the Hoagland Laboratory —the gift of Dr. C. N. Hoagland—under the immediate supervision of that gentleman, who provided the funds for the building and its equipment, "will supply all the facilities, both for students and for advanced investigators, which can be found in the best-equipped laboratories of Europe."[11]

In Missouri the Legislature has appropriated $5,000 for "the creation of laboratories for bacteriological study and investigation, and for the culture of vaccine virus, in connection with the State University at Columbia."[12]

A STATE LABORATORY OF HYGIENE.

In Michigan, the Legislature has appropriated $35,000 for the building and equipment, at the State University, of two laboratories, under one roof, one being a laboratory of hygiene. The building will be ready for occupancy next October. Dr. V. C. Vaughan, Member of the State Board of Health, and Professor of Hygiene in the University, is Director of the laboratory.

Prof. Vaughan's first Quarterly Report of work (the chemical laboratory being temporarily used) has been published by the Michigan State Board of Health,[13] and includes a history of important contributions to sanitary science. He has isolated the Eberth bacillus of typhoid from water believed to have caused that disease, he has caused a disease resembling typhoid by injecting these bacilli into an animal, and has caused a rise of body temperature in animals by injecting a ptomaine, formed by those bacilli, but sterilized before its use. Dr. Vaughan has been able to find these bacilli in the air of a house-drain into which discharged a soil-pipe carrying discharges from a typhoid patient. He has made cultures of the bacilli there found. Other cases of typhoid fever had apparently been caused by the inhalation of air contaminated by emanations from that same house-drain.

A SPECIFIC CAUSE OF TYPHOID FEVER.

That filth alone will not cause typhoid fever, in the absence of the specific cause, is constantly becoming more evident. A notable instance is given by Dr. F. H. Blaxall, R.N., in the *London Practitioner*.[14] An outbreak of typhoid fever oc-

[9] H. W. Conn, Science, March 16, 1888, pp. 123-6.
[10] Science, March 16, 1888, p. 125.
[11] Dr. Sternberg's Address, Sanitary News, vol. xi, p. 50.
[12] Dr. Homan, Sanitary News, January 28, 1888.
[13] Proceedings of the Mich. State Board of Health, January, 1888.
[14] August, 1887, pp. 157-160.

curred among persons using water from a spring which, although known to be badly contaminated by excreta, had been used without causing typhoid fever for a period of fifteen years; yet soon after the arrival of cases of typhoid fever in the vicinity of the spring, 36 families were invaded, with some 80 cases of recognized typhoid fever, 8 proving fatal. All the persons attacked had drunk of the water from the spring. In this instance, the disease was not communicated from person to person, nor to persons who used the same water-closets as did those who had the fever.[15] This evidence is especially of importance as to the protection of the water supply from typhoid excreta, and of the disinfection of all excreta from typhoid patients.

BACTERIA AND SUMMER DIARRHŒA.

Results of experiments and bacteriological observations in summer diarrhœa have been published.[16] Many bacilli were studied, but one chief bacillus, which was found, somewhat resembled that of Asiatic cholera, but is shorter and thicker. Cultivation of bacilli from air from sewer ventilators showed some which resembled those found in the organs of persons dead from diarrhœa, but they were much slower in their growth. Those from the intestines developed rapidly, liquefied jelly became alkaline, and bacilli of the fifth generation emitted a powerful odor of decomposition. A very small dose of the artificially cultivated microbes produced a smart attack of diarrhœa.[17]

ALBUMINURIA FROM SEWAGE POISONING.

Dr. George Johnson, in the *Brit. Med. Jour.*, March 13, 1888, "directs attention to the fact that among the many causes of blood contamination and consequent albuminuria, sewage poisoning is by no means an infrequent one.[18]

BACTERIA IN CEREBRO-SPINAL MENINGITIS.

Fränkel, Weichselbaum and others, in a series of cases of primary cerebro-spinal meningitis, have obtained pure cultivations of Fränkel's pneumococcus[19] which, I suppose, is the coccus first discovered by Dr. Sternberg, in his saliva, (*Micrococcus Pasteuri*, Sternberg), and which is fatal to rabbits, and has been found in pneumonia more frequently than other microörganisms. Weichselbaum has also described a new coccus in six cases of idiopathic cerebro-spinal meningitis.[19] Dr. F. Goldschmidt has reported the same microörganism in one case;[19] and Dr. Biggs, of New York, in one case, found a diplococcus probably identical with the one described by the other two observers.[19]

THE SPECIFIC CONTAGIUM OF SCARLET FEVER.

That there is a specific contagium of scarlet fever is not doubted now, I suppose, by any intelligent physician; but just what that contagium is has not yet been satisfactorily proved. The results of Dr. Klein's investigations into the subject, in connection with the Hendon cow disease, supposed to be scarlet fever in the cow, have been strongly combated.[20]

Experiments by Dr. Edington, of Edinburgh, (made at the suggestion of Dr. Jamieson,) carried on with bacteria from the blood, organs, and skin in different stages of scarlet fever, revealed one bacillus constantly present in the blood before the third day of the fever, and in the desquamating scales after the twenty-first day. This he concludes is the contagium of the disease.[21]

DIPHTHERIA IN MAN AND ANIMALS.

Dr. Turner's report to the Local Government Board,[21] in England, in 1887, collected what was known on the subject of diphtheria in animals. Instances were given of its spread in pigeons, in fowls, and afterwards to families of persons, among swine, horses, cats infected from man and man from cats, successful inoculation of cats, and the occurrence of diphtheria among shepherds after the disease had prevailed among sheep. Bacteriological studies of diphtheria have led Loeffler to conclude that the bacillus is different in the calf and in the fowl, and still different in man.[22] Such discrepancies remain for further investigation. Probably much knowledge, useful for the saving of human life, might soon be worked out if the people would maintain more workers in this field of investigation.

SUPPURATION ALWAYS DUE TO MICROÖRGANISMS. A FUNCTION OF THE LEUCOCYTES.

Although migration of leucocytes occurs under a variety of conditions and circumstances, the general principle that suppuration is always due to the action of microörganisms seems to be established.[23]

A recent writer has said:[23] "There seems to be but little doubt that there exists a constant relation (as regards several of the infectious diseases certainly) between the amount of suppuration and the degree of immunity that different animals show to the respective diseases. The greater the emigration of leucocytes the greater is the insusceptibility, and *vice versa*, the leucocytes apparently destroying, or counteracting the effects of, the microörganism. Suppuration thus comes to be a conservative process, protecting the system from the action or entrance of the microbes. Perhaps this is always its function."

At any rate, knowledge of the relations of the white corpuscles of the blood to the specific mi-

[15] London Practitioner, August, 1887, pp. 157–160.
[16] H. Tomkins, M.D., London Lancet, August 20, 1887, pp. 361–3. Abstract in N. Y. Med Jour., October 1, 1887, p. 390.
[17] London Lancet, August 20, 1887, p. 363.
[18] London Practitioner, April, 1888, p. 287.
[19] New York Med. Jour., March 17, 1888, p. 288.
[20] British Med. Jour., August 20, 1887. N. Y. Med. Jour., October 1, 1887, p. 390. Science, February 10, 1888, p. 67.
[21] British Med. Jour., June 8, 1887. N. Y. Med. Jour., October 1, 1887, p. 390. N. Y. Med. Abstract, July, 1887, pp. 251–5.
[22] Abstracted in Brit. Med. Jour., August 20, 1887, pp. 416, 417, and briefly in N. Y. Med. Jour., October 1, 1887, p. 390.
[23] N. Y. Med. Jour., March 17, 1888, pp. 288, 289.

croörganisms of disease seems to be progressing.[24]

PERIOD OF INCUBATION.

Some experiments by Prof. Vaughan, of the Michigan State Board of Health, indicate that the length of the period of incubation of typhoid depends much upon the number of specific bacteria taken into the body, and whether or not a communicable disease shall be contracted may depend upon the quantity of the specific cause which gains entrance to the body.

DIAGNOSIS OF CHOLERA IN DOUBTFUL CASES.

Further evidence of the practicability of aiding the diagnosis of cholera in doubtful cases, by cultivations of the microörganisms from the intestines or the excreta, has been supplied by Drs. S. T. Armstrong and J. J. Kinyoun, of the U. S. Marine Hospital Service, and Drs. H. Biggs and T. Mitchell Prudden, of New York.[25].

CAN CHOLERA BACILLI REPRODUCE IN WATER OF NEW YORK BAY?

The salt water in New York Bay has been "Sterilized and inoculated with pure cultivation of the spirilla of Asiatic cholera and also of Finkler and Prior," by Dr. J. J. Kinyoun, of the U. S. Marine Hospital Service,[26] with the result that "These spirilla have not only been kept alive, but have also greatly increased in numbers."[26] The inference is published that "If dejecta from cholera patients should be thrown into the lower bay, cholera could gain a foothold on the contiguous shores where every condition favorable to its development and propagation sometimes exist."[26] The temperature at which the cultivation was maintained is not reported; neither is the temperature of the water at the shore in the most dangerous season, but if there is a probability that such development can occur there, further experiments and observations of temperature will be awaited with great interest, because of the practical importance of the subject, for the safety of this country from cholera.

QUARANTINE.

There has apparently been great progress in keeping certain diseases out of this country by means which we yet call quarantine. Formerly yellow fever was so frequently introduced into New Orleans that many believed it was endemic there; and cholera was generally brought into this country whenever it was prevalent in Europe. Now both of these diseases are kept out. The great money losses to trade in New Orleans have tended to aid sanitarians in perfecting the quarantine at that point. Under the able leadership of that brilliant sanitarian, Dr. Joseph Holt, the quarantine at New Orleans has been brought to a high state of perfection. Perhaps the best evidence of the possibility of general progress, however, is the general criticism of what has heretofore received no attention. As an offset to the criticism of the quarantine system at New York, it should be noted that during the last year that port of New York has been tried—cholera was brought to it, and, so far as is now known, it was not allowed to gain a lodgment. Aside from speaking well of a bridge that allows one to cross in safety, there are other considerations which should make us slow in trying to displace State or local quarantines; there are vast State and local interests in trade and travel which should join with the interests of public health in building up and improving local quarantine administration. Thus far, the United States Congress has not exhibited such a steadfast purpose to guard the lives of the people as to inspire confidence in the United States Government as the best and only protector of the lives and health of the American citizens. Just now there seems to be those who urge that the National Government shall gain control of *all* quarantine. Without considering the constitutional objections, it seems to me that it will be much safer to hold fast to that which we have, at least until such time as the National Government shall demonstrate its ability to do as well. What is really needed is that the local quarantines shall be perfected; that the National Government shall *add* its best services to those of the States and localities;[27] and that those other dangerous communicable diseases, diphtheria, scarlet fever and typhoid fever, which cause much more sickness and deaths than do yellow fever and cholera, shall also be excluded by quarantine. If it be argued against this plan that those diseases are endemic, it may be replied that before its exclusion yellow fever appeared to be endemic; and small-pox is still, yet we try to exclude it, and undoubtedly save thousands of lives thereby, and might exclude it almost entirely by more perfect methods.

YELLOW FEVER.

If, as reported, yellow fever is now present in Florida, there is cause for alarm which should lead to extraordinary efforts to limit that dread disease, because it is early in the season, there is no State Board of Health in Florida, and the inspection of travel, isolation of infected persons, disinfection of all infected articles—those measures which constitute the new "quarantine"—are not easily enforced, and in inland places can be avoided by those familiar with the locality. Nevertheless, these measures are the most promising yet suggested.

SMALL-POX.

Since January 1, 1888, small-pox has been reported in twenty-one States of this Union.[28]

[24] N. Y. Med. Abstract, March, 1888, p. 56. Also Lectures by Prof. Ray Lankester, Sanitary News, Chicago, April 21, 1888.
[25] N. Y. Med. Jour., Nov. 12, 1887, pp. 546-7 and 548-9.
[26] Sanitary News, Feb. 18, 1888, p. 188.
[27] There is now a bill before Congress to improve the National quarantine, which it is hoped may become a law. It has passed the U. S. Senate.
[28] Maine, Massachusetts, Rhode Island, Connecticut, New York, Pennsylvania, Delaware, Ohio, Kentucky, Indiana, Illinois, Michigan, Wisconsin, Minnesota, Iowa, Kansas, Colorado, California North Carolina, Tennessee and Louisiana.

Small-pox is now reported in nine States as follows: Connecticut, California, Colorado, Illinois, Kentucky, New York, Minnesota, Pennsylvania and Wisconsin. Although small-pox is still (or was recently) present in nine States, it is not spreading, and it speaks highly for the utility of the public-health service generally throughout this country that although introduced into twenty-one States of the Union, small-pox has not been allowed to spread to any great extent, except in California, where its restriction, on account of the Chinese, was especially difficult.

CHOLERA SHOULD BE MADE A DISEASE OF THE PAST.

Dr. W. J. Simpson, Health Officer of Calcutta, has reviewed, in the *Indian Medical Gazette*, the evidence as to the influence of season, rain-fall, and water-supply upon cholera, accepting the evidence brought out by Dr. Payne[29] and elaborated by Dr. O'Brien,[30] that in Calcutta the cholera was greatly reduced by the improved water-supply, and the evidence collected by myself that it was greatly influenced by the rainfall,[31] and he has added much to the completeness of these converging lines of evidence. Dr. Simpson says: "In the common condition of polluted wells and tanks, and the habits of the people, we have an explanation of seasonal cholera prevalence in Calcutta, synchronous with cholera prevalence in the neighborhood, while the increased scarcity of water in the town during the last five or six years, culminating in such expedients as underground tanks for collecting water which ought to reach at least the first floor of the houses, we have a fair explanation of the increased cholera prevalence of late years in Calcutta, out of proportion to the period between 1870 and 1880." Speaking of the effect of the rains, he says: "They purify the air, they wash the filth from the soil, they purify and give an abundant supply of water to the wells and tanks; but, in addition to these things, in the town they perform a most important function, they flush the drains." Dr. Simpson closes his forty pages with these words, "A study of the distribution, progress, and seasonal changes indicates that the chief factor is want of pure water."

Elsewhere I have suggested that "If the prevention of cholera in its home is so largely dependent upon the rainfall and upon a good water-supply, one direction is thus indicated for most successful efforts for its prevention in this country."[32]

Here I wish to suggest that, inasmuch as all the cholera throughout the world is derived from the small endemic area around Calcutta, the nations of the earth might well undertake an international work for doing away with that "chief factor" of cholera prevalence in the endemic home of cholera, namely, that "want of pure water." Two-thirds of the cholera mortality in Calcutta has once been stopped in that manner.[33] The inference is plain that the other third might be stopped by more thorough but similar means, and if in Calcutta then also in the area around Calcutta. The work would be difficult, partly because about Calcutta the ground-water is brackish, but I believe the scheme is entirely practicable. It would be a noble mission to accomplish this, and, as an international work, it would "pay" in dollars and cents.

PURIFICATION OF WATER BY CHEMICALS.

Progress has been made in our knowledge of methods of improving public water-supplies. The practice of adding a minute quantity of alum to water in order to clarify it, is an old and very familiar one. Recently one method of applying it continuously to public water-supplies has been patented. Prof. Albert R. Leeds, of Hoboken, N. J., added alum, in the proportion of half a grain to a gallon of water, and found, with the precipitation of peaty matter, etc., a reduction of the bacteria to such an extent that whereas before precipitation it contained 8,100 colonies per cubic centimetre, after precipitation the supernatant water contained only 80 colonies. They were all the bacterium lineola, and by filtering this supernatant water through a double thickness of sterilized filter paper into a sterilized tube, he found no bacteria in the filtered water.[34] An interesting question is, whether or not the bacteria of typhoid fever would be removed by this same agent in a similar manner. Prof. Leeds suggests the addition, also, in certain cases, of lime or soda, or a minute amount of soluble iron salt, like ferric chloride, and its removal, together with the bacteria, by filtration.

VITAL STATISTICS.

Vital statistics supply an important basis for public-health work. We are dependent upon mortality statistics for our knowledge of what are the greatest dangers to life, and of what progress we are making in the prevention of deaths. Although the importance of vital statistics is well known to sanitarians, it is not yet appreciated by the people generally; and the practical work with statistics is so difficult that comparatively few master the general principles. There are no journals or ready means of comparison of views among statisticians; therefore progress is slow, especially in laws for the collection of vital statistics. Yet there is progress toward the collection and the improvement of some statistics in this country.

[29] Arthur J. Payne, M.D., Surgeon-Major, Health Officer of Calcutta. Report on Sanitary Measures in India in 1876-7, presented to Parliament, London, Eng., 1878, p. 118.

[30] J. O'Brien, M.D., Surgeon-Major, etc., Annual Rep. of Health Officer of Calcutta, 1884.

[31] Trans. Am. Pub. Health Assoc., p. 165, vol. xi.

[32] Trans. Am. Pub. Health Assoc., pp. 154-165, vol. xi.

[33] Trans. Am. Pub. Health Assoc., vol. xi, p. 165. Also, Cholera Mortality in Calcutta, Simpson, p. 39.

[34] The Medical News, Phila., Sept. 3, 1887, p. 262.

In Minnesota, Dr. Hewitt, Secretary of the State Board of Health, has within the past year effected considerable in this direction. In the Connecticut State Board of Health Bulletin for February, 1888, Dr. Lindsley, Superintendent of Vital Statistics, says: "For the first time since these monthly bulletins have been issued, reports have been received at this office from every town in the State." The last quarterly report of the Illinois State Board of Health says: "For the first time since the collection of vital statistics was begun, all the counties have made returns of births and deaths."

SICKNESS STATISTICS.

For some purposes, including those of immediate action for the restriction of dangerous diseases, reports of sickness are much more valuable than the reports of deaths. An account of the methods successfully employed for several years in Michigan was given before this Section last year. Those methods are being continued in Michigan, and the State Board of Health of Ohio has established methods somewhat similar, which promise very useful results.

THE ETIOLOGY OF DISEASES.

Sickness statistics are especially valuable in studying the causation of diseases. The sickness is nearer than the deaths are to the time of the causation of the disease. The statistics of sickness and meteorology in Michigan have proved that most of the important diseases are controlled by conditions of the atmosphere. Even such diseases as small-pox and scarlet fever, due to specific causes, have close relations to the coldness and dryness of the air inhaled. This knowledge does not antagonize the importance of isolation and disinfection in such diseases, but it shows why these measures are especially important when the air is cold and dry; and, inasmuch as the virus of those diseases clings for a long time to infected articles, it explains why, unless disinfection is enforced at all times, these diseases tend to break out and spread during the cold seasons of the year. The explanation is found in the fact that nearly every one of the diseases of the throat and air-passages is increased after the inhalation of cold dry air. Communicable diseases which enter by way of the air-passages thus find at such times a most easy entrance. Consumption is found to follow the same law, increasing after the cold dry season of the year, and decreasing after the warm moist season.

It appears, therefore, that there has been great progress in our knowledge of the relations of sickness to meteorological conditions, so that, in Michigan at least, we are now able to say under what meteorological conditions each one of many of the most important diseases will increase or decrease in prevalence. The times, or at least the conditions of the rise and fall of the sickness from these diseases[35] can be predicted in advance with almost as much accuracy as can the recurrence of the seasons. This may seem to you like laying claim to one of the grandest of recent human achievements, but I think the statement is strictly true, and this knowledge of the conditions tending to the occurrence of diseases, should aid us greatly in the adoption of measures for their prevention.

THE PRESIDENT'S ADDRESS BEFORE THE AMERICAN RHINOLOGICAL ASSOCIATION.

Delivered at the Annual Meeting, Cincinnati, Ohio, September 12, 13, and 14, 1888.

BY CARL H. VON KLEIN, A.M., M.D.,
OF DAYTON, OHIO.

FELLOWS OF THE AMERICAN RHINOLOGICAL ASSOCIATION:—Under the present system of modern organizations, be it a political government, a commercial or scientific organization, be it ever so small, it is demanded from the head of such government, or such commercial or scientific organization, to deliver an annual message or address. A duty which I am called on to fulfil, regardless of my ability, and probably my errors recorded for generations to come; for words are like milk, which, once being drawn from it's original source, can never be returned again. At this age of remarkable discoveries and wonderful developments in science, one might not at ease deliver his sentiments without fear that some one will reply to his errors, as times are not as they used to be. Three hundred years ago, could a person have been put to sleep and have continued in that state fifty years, on awakening and returning to the schools of medicine, he would have found the same text-books, the same mode of teaching, the same elements of thought, perhaps without a single change.

Now, let a person remain in seclusion for not more than five years, on returning he would find many changes in the teaching and practice of medicine. For medicine in this century comes and departs with the fashions of garments, many have died with the Grecian bend, and as many more will die with the present mode of the posterior phenomena. The continual shifting in theoretical medicine gives a theory, but a short lease of life. A new theory established to-day, after laborious and tedious experiments, discarded to-morrow. Fruitful as has been the present age in changes of medicine, yet can any one of our medical colleges boast of a professor's chair on Rhinology? In many it is so entirely unknown,

[35] Influenza, tonsilitis, bronchitis, pneumonia, croup, diphtheria, scarlet fever, small-pox, consumption, remittent fever and typhoid fever. Tables and diagrams proving this, relative to some of these diseases, are published in Trans. Int'l Med. Cong., Washington, D. C., 1887.

that it is not even regarded as an object of secondary importance.

The Talmud relates that Rabbi Huna once asked his son why he did not attend the medical lectures of Rabbi Chisda? "Because," replied the son, "he only treats of temporal and wordly concerns." "What," said the father, "he occupies himself with that which is necessary for the preservation of human beings, and this you call wordly affairs!" Trust me, this is among the most estimable of studies. I will as well say to those who consider Rhinology of a minor importance that it is the most worthy study in the science of medicine. With the complete modern scopic inventions one cannot but help to progress in the investigations of diseases, and discover afflictions through the rhinol cavities diseases of other organs.

The rhinoscope brings before us stupendous facts which we are called upon to observe in our daily practice, which gives advantages in treating diseases of more obscure cavities, and lessens the suffering of the human race, and improves the health of many who are by nature predisposed to inroads of hasty death.

I must confess that I am unable to understand how a physician can treat a disease in which he received no instruction, and how a profession like ours intended self sacrifice to devotion or relief of human suffering could be guilty of empiricism. I consider those who treat diseases for which they are neither qualified nor prepared empirics, however conscientious and faithful a follower he may be of the catalogue of diseases contained in his symptom book. Yet I hold it dishonest if he tampers with that to which his eye is neither trained to see nor his hand to perform.

No branch of the healing art has, indeed, been marked with more empiricism than Rhinology; she struggles against far greater difficulties than any other branch of specialistic medicine, for both ignorance and prejudice have lent their aid toward retarding its advancement. It is a common thing for a traveling imposter to announce himself to the public as a catarrh specialist in addition to being a specialist of all other organs of the human body, while the regular practitioner as well, with his bulb spray, is ready to make fifty cents whenever he can, regardless of his brother's toil, and all his brother has learned by sacrificing with midnight oil to the knowledge of modern medicine.

As long as a physician brings his wisdom into market as an article of commerce, we cannot expect from him but to do anything for a remuneration, he will undertake to treat disease, even if he knows that he is deficient in that branch. There are many specialists who are pernicious to their class by dealing with their specialty like a merchant, who tries to sell other goods if he has not the article you call for. If you will ask him for satin, which he has not in stock, he will aim to sell you silk; just so with dishonest specialists. They will try to make their patients believe that the disease of the organs afflicted come from diseases of their specialty, for the sake of gaining gold, which has always been a snare to men. Oh, gold! Chief source of hills, corruptor of life, that turneth all things wrong!

> "Gold breaks through every sacred tie,
> And bids a friend or brother die;
> The fruitful source of kindred strife,
> Gold would not spare a parent's life.
> Long wars, and murders, crimes untold,
> All spring from the cursed thirst for gold."

Physicians of vicious practice are doubly pernicious, being not only guilty of immoral practice themselves, but likewise of spreading them far and wide among their fellow practitioners, who profess better things. It is equally wrong to treat maladies in which diagnosis cannot be made, as it is to treat patients who apply for treatment of diseases with which they are not afflicted. "To those who are not sick the physician is useless, and the pilot to those who do not sail."

Cicero says: Those are wise monitors who teach us to do nothing of which we are doubtful, whether it is honest or just; for whatever is honest, manifests itself by its own lustre, but doubt implies the entertainment of injustice. Let me not, however, be misunderstood. It would grieve me even to be suspected of the folly and injustice of promiscuous accusation. Believe me that no one is convinced more than I that the medical profession possesses the highest grade of human respect, but there is never a garden ever so beautifully cultivated that has no weeds. The profession to which we belong is not an indolent occupation. Look at it's history and study the magnitude and quality of it's labors. Why has it done all this? What would it have done if it had not ambition and aspiration and much heart-hunger? Has not the medical profession had to fight it's way from the beginning of the history of man? What profession is there that has accomplished anything for which mankind are the better? Every branch of modern science, every field of modern research, every pursuit which has been under the subject of modern study has been cultivated by the medical profession. Look at the authors of every branch of specialistic science, and no one without the title of doctor of medicine, should such a profession be guilty of having within it's faculty malevolent fellows, who would be ready to commit any crime by treating suffering humanity for no other purpose but to their coffers fill? Branded with Ovid's description of deceit to whom all fingers point:

"Hither comes the tradesman, having a girdle around his robes, and in a state of purity draws

some of the water to carry it away in a perfumed urn. He sprinkles his hairs, too, with the dripping bough, and in a voice accustomed to deceive, runs through his prayers O, Mercury! or have invoked the great Godhead of Jove, whom I did not intend to listen to me. But give me profits, give me the delight that arises from gain, and grant that I may find it lucrative to impose upon my customers."

Now, wherein lies the remedy? Gentlemen, the only true solution is a thorough medical edution. I maintain that no one can receive a thorough medical education, without a thorough academical training, the mind that is trained to academical knowledge is inspired to a nobler and sublime course in life, in righteousness, piety, benevolence, industry, sobriety, equity, and frugality, kindled with aspiration, for a special pursuit in science to whatever calling by nature of human duty he may be assigned to. If the physician possesses an academical knowledge, he will make the boundless science of nature his study, he will aim to enquire from the beginning of the creation of man, and turn every stone to find inscriptions that may be engraved by organic life. He will form exalted ideas of monuments of primeval antiquity, and make use of all antemundios ways that may be conjured from the outmost bosom of the earth, in order to throw a bright light upon development of medicine. Such men can have no other motive than human welfare. And when they read the works of great men which existed in all generations, whose carcasses have long decayed, but their heroic name still lives, then they are kindled with high aspirations and are anxious to become heroes in the conquest of nature. Thorough education make men gentlemen by habit, by custom, by civilization, by law, and by dress. From the history of the infancy of our race unto the present day, developments of trades and arts are emerged from their primitive state to a perfection, by those who devoted their attention to one kind of skill, and made life almost double it's value.

Those stupendous facts in which the whole spirit of the 19th century moves is due to a higher grade of education. In this age of multifarious learning, in which the whole spirit of humanity powerfully and wonderfully moves, cannot, as formerly, be overshadowed by ignorance and superstition. Thorough education will dissipate the darkness of empiricism and disloyalty to humanity. The inventions of surgical instruments is the wonder of this generation. Every day we hear of some new design that harnesses a new force, and assists in means of curing disease. The most useful of all of them are the different scopical inventions, and by their aid physicians are enabled to make correct diagnosis which leads to a rational treatment of disease of more obscure cavities. To the scopic appliances we are greatly indebted for the development of specialties in the practice of medicine, and yet has it not developed charlatans and empiricism? Has not the vaginal speculum been the cause of producing so great an army of gynæcologists that 99 per cent. of the young men who graduate in their schools, regardless of their pathy, immediately equip themselves with a chair and a speculum? Has not the rectal-speculum encouraged the so-called pile doctors? And has not the rhinoscope been the means of producing thousands of traveling catarrh specialists, who pretend to see more with their appliances than the ordinary intelligent physician?

> "The doctor's optics must be keen,
> Who sees what is not to be seen."

Gentlemen, these obstacles may indeed be great, yet, not insuperable, and we should not allow them to daunt our spirit.

I now come to that which to us is the most painful and dearest part of our duty, and on which the spirit of our entire profession is based, and that is charity. We may ask ourselves, might not a subdivision in our profession cause great destruction to the essence of our occupation? Will it not drive from our doors charity patients? It is necessary for a specialist, in order to secure the comforts of life, to charge larger fees for their services than the public has been accustomed to pay general practitioners. This being understood by the poorer classes, might not they fear exorbitant prices, and in all probabilities suffer from painful and dangerous disease before they would venture to consult a specialist. There exists three classes of charity patients:

1. Those that ask charity.
2. Those that are prevented from asking.
3. Those that cannot ask.

The first is the one that justly applies for it. The second are those who are deprived of the liberty of asking, by being in prisons, asylums, almshouses and hospitals; they cannot receive any other treatment than that furnished by the institution. Such institutions generally have physicians who, by their political influence, have mastered the entire science of medicine. The third is the most pitiful of all, and in the pride of charity he suffers the pangs of death; aside of fearing false modesty of exposure, he also dreads rejection to his askings of his fellow men.

Gentlemen, let it be known that we are not specialists for the purpose of gain, but from conviction that the knowledge of medicine is too great a science for one man to accomplish as a whole, and that we are not practicing for revenue only; we are also ready to receive any one that applies to us for charitable treatment. Let not this beautiful passage of the New Testament be cast upon us: "Though I speak with the tongues of men and of the angels, and have not charity, I am become as sounding brass, or a tinkling

cymbal." Those who give charity to suffering for the purposes of fame, is mockery and indignity; he who uses the crown of charity in order to gain, deserves not the name physician. Let our Association become famous not only in the annals of science, but also for philanthropy. Let us not be in a hurry for wealth, let us not immerse ourselves in a simple study of augmenting a fortune and lose the art of reason by deserting the post of a physician. Let us also be specialists in philanthropy. Look at the history of philanthropists, and you will find that they are all specialists in their cause. The immortal Valentine Hauy spent his life in philanthropy for the blind; Johannes Falk, the philanthropist for children; Henrich Pestalozzi, the philanthropist of education; Augustus Herman Francke, philanthropist of orphans; Bartholomew de Las Casas, philanthropist to American Indians; John Howard, philanthropist of prisoners; Sir Moses Montifiore, philanthropist of the oppressed by religious persecutions, etc.

The true physician should be the eyes of the blind, the ears of the deaf, the tongue of the dumb, the brain of the imbecile, and the limbs of the cripple.

By following this rule our Association will become prosperous and renowned and conspicuous among men. While our Association is still young, yet it deserves congratulation for its past success for her wonderful work in progress of practical suggestions in rhinological appliances, and of treatment in diseases of rhinology we can congratulate ourselves for opening the broad gates to the obscure cavities of the upper respiratory tract. We can congratulate ourselves for its wonderful development in training and educating the world to the spray method, to the use of absorbent and essential oleates, for the revision of proper pathological nomenclature, for educating the physician to look after the upper respiratory tract, whilst he is making an examination of the entire body, and for calling the attention of the ophthalmologist and otologist to look for turbinated and other processes that might have produced disease of the organs in their specialty. We can also congratulate ourselves for the world-renowned repute, for the wonderful growth of our organization, and more so for the chosen quality of its members.

In conclusion, gentlemen, I will thank you for the great honor you have bestowed upon me by making me chief magistrate of this worthy organization. You may feel assured that no one is more sensitive to its dignity than I. I also thank you in the name of my friends and associates, who feel highly honored by my elevation. Trusting that we will live and prosper to see every one of our Fellows to pass the high honor which I am now about to deliver to some one more worthy than my humble self.

ORIGINAL ARTICLES.

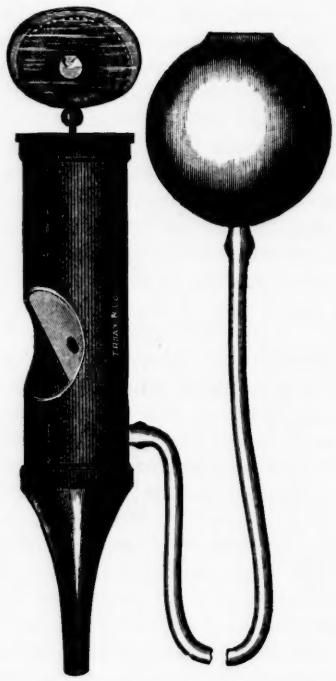
A NEW OTOSCOPE (PNEUMATIC) FOR THE DIAGNOSIS OF MIDDLE-EAR AFFECTIONS UNDER PASSIVE MOTION.

AN IMPROVED TONSILOTOME. A NASAL SPECULUM.

Read in the Section on Ophthalmology, Otology and Laryngology, at the Thirty-Ninth Annual Meeting of the American Medical Association, May, 1888.

BY SETH S. BISHOP, M.D.,
OF CHICAGO, ILL.

Preliminary to a discussion of pneumatic experiments upon the ear, it will be a natural proceeding to describe the instrument by means of which we may produce and observe the effects of passive motion in the drum.



The pneumatic otoscope which I have devised for the purpose named consists of a small milled cylinder with an ear-funnel of the most serviceable pattern at one end, and an eye-piece containing a lens, around which revolves an adjustable mirror, at the other end. In the side of the cylinder a spacious aperture admits the light to the illuminating surface beneath. At the funnel end of the instrument is a pneumatic chamber provided with a flexible tube ending in a rubber bulb, or a diminutive syringe, or a lip-piece, as one may prefer. Objection might be made to using the lip-piece for producing suction for fear that the air from the external auditory meatus might enter one's mouth, but it cannot do so if the funnel is properly adjusted to the canal, for the air chamber of the otoscope represents many times the volume of the column of air contained in that

part of the meatus that lies between the end of the funnel and the drum. It is necessary to exert only slight suction force to cause excursions of the drum membrane sufficient for our purpose. The tip of the funnel should be covered with a section of the thinnest soft rubber tube, about one inch in length, to insure an air-tight fit into the meatus. If the opening of the canal is very large the rubber tube should be rolled back upon itself, so as to form a shoulder on that part of the funnel which closes up the mouth of the meatus when the otoscope is inserted. The rubber not only secures a perfect adaptation of the parts to each other, but prevents the funnel from pressing uncomfortably against the walls of the canal. If the meatus is very narrow, a small section only of the rubber should be slipped well up on the funnel to form the shoulder, leaving the end free to enter about half an inch. When it is to be employed as an ordinary otoscope, without the pneumatic experiment, the rubber tip need not be slipped over the funnel.

This instrument is the result of a considerable experience with Siegle's pneumatic speculum, improperly called an otoscope. The advantages of the pneumatic otoscope over the speculum are: First, it is self-illuminating, not requiring the aid of a hand mirror, or forehead mirror, the light being accurately focused on the drum; secondly, it affords a magnified view of the drum; thirdly, the object mirror presents a perfect picture of the interior of the ear, and without the necessity of looking through a lens; fourthly, it can be operated in a smaller canal than will admit the speculum; fifthly, the bright reflection of light into your eyes by the glass of the speculum, the black background of which converts the glass into a mirror, can be avoided in the otoscope by the proper and unvarying relations, and the color, of its various parts.

The teaching of otology is much facilitated by means of this instrument in that the instructor may be sure that students are looking upon the field of vision which is being described. Heretofore it has been necessary to bend closely over patients to look through an otoscope while it was being adjusted, then in rising to afford students the opportunity of inspecting the drum, the necessary movements of your body, or of the patient's, would throw the drum out of the field, or darken it, and compel a readjustment of the instrument. These disadvantages made demonstrations uncertain, long and tedious. The object mirror allows the teacher to stand or sit erect by the patient while he takes observations, then by a slight movement of his head only, or by a turn of the mirror, he may allow any number of students to pass in line, each viewing what is being commented upon. If one pays attention to the lighting up of the end of the funnel, as he can do by looking obliquely through the aperture over the reflector, he may be sure that the drum is illuminated and within sight. This is made practicable by dispensing with the large funnel fixtures that project from the sides of other otoscopes, and that prevent the teacher from knowing whether the drum is illuminated properly or not, except while he is looking through the lens. The advantage of dispensing with the attachment is not diminished in the least by sacrificing any of the brilliancy of illumination. The objection which some physicians have urged against magnifying otoscopes, that they were compelled to look through a lens, is met in this instance, for one needs only to look at a plane mirror to examine the drum and canal. Should it not be desired to use the object mirror, except in demonstration, it can be turned back, or removed by slipping the adjustable ring, to which it is attached, off from the cylinder.

THE PNEUMATIC TREATMENT.

The value of passive motion in the treatment of stiff joints and atrophied tissues is well recognized in general surgery. The application of the same principle to the same conditions in aural surgery is attended with equally beneficial results. But this is a neglected fact, for you rarely see or read of its use in ear treatment. So little has been written upon the subject, as compared with its importance, that no apology is needed for speaking somewhat minutely in respect to the behavior of the drum head and ossicles under such experiments as the following.

In examining and treating the middle ear with the pneumatic otoscope the instrument should be introduced into the auditory canal with the longitudinal axes of both corresponding, just as any otoscope should be placed. If the instrument is correctly adjusted, a slight suction on the rubber tube will cause the little column of air, which lies between the drum and the funnel, to move outward to the air chamber. The examiner is supposed to be inspecting the drum at the same time. If the drum is healthy, he will observe the membrana tympani perform an excursion toward his eye, carrying the handle of the mallet with it, while the triangular light spot changes position as the relative concavity of the membrane changes. Release the column of air and it moves inward again, allowing the drum head, manubrium and light spot to resume their former positions. Press upon the column of air and it moves inward, carrying the membrane and mallet handle with it, causing motion in the joints of the ossicles; the short process projects outward prominently, the light spot changes with the increasing concavity, and the ossicles become more prominently visible as the membrane presses around them. By alternately rarefying and condensing the air in this manner the amount of mobility in the drum head and the chain of bones may be determined under brilliant illumination and magnified inspection. If anchylosis of the

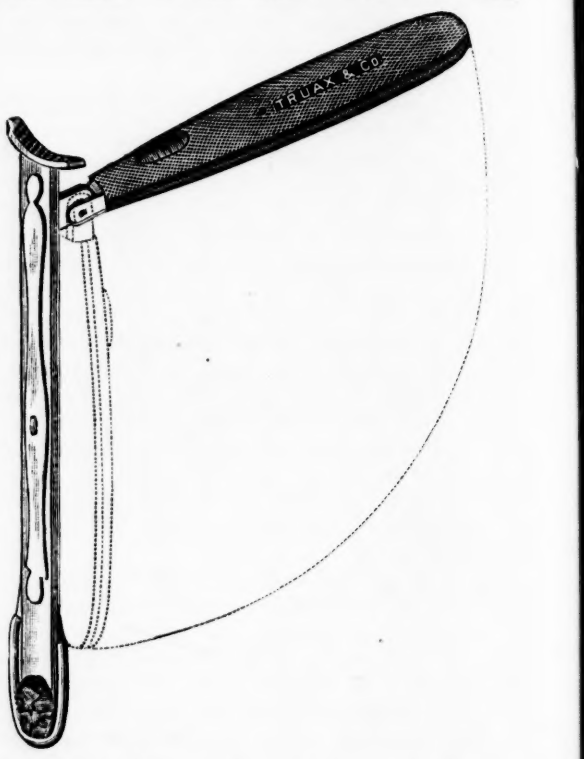
joints of the ossicles, or if bands of adhesions between the bones and the walls of the tympanum exist, the handle of the malleus will be seen to be impeded in its movements, or it may remain fixed, while the membrane about it may be quite flaccid. At this point I wish to anticipate criticism by stating that I have never known any ill effects to follow this line of treatment. If the membrane is greatly thickened in patches, or if it contains calcareous deposits, these portions will be seen to resist the action of the vibrating column of air, while normal parts, and areas of thin cicatricial tissue that indicate the location of former perforations, may respond readily to the experiment. In cases where the drum head is very thick, or where the ossicles are bound down by adhesions to the walls of the tympanum, no perceptible movement may be obtained at first, but decided improvement often follows a persistent use of the pneumatic treatment.

In obstinate cases the progress may be hastened by making pressure directly upon the processus brevis by means of a probe covered with a soft rubber tip. Stiffness in the joints may be overcome in this way so as to facilitate the action of the otoscope. One should press gently on the process until the handle moves, then retract the probe until the malleus resumes its former position, press again, and so repeat the movement several times. Then the pneumatic principle of the otoscope should be applied until one is satisfied that the advantage gained will not be lost. The pressure need not cause pain, but the mallet should be moved until the patient experiences a sensation of movement or of sound. In several patients in whom I have applied passive motion in this manner during the last few months I have increased the hearing-distance for the watch from contact to three, twelve, twenty and thirty-two inches, or one-half the normal distance.

The otoscope may reveal an opaque membrana tympani, so hypertrophied and stiff that it does not yield to the pneumatic treatment. In such a case it is nothing less than a barrier to the admission of sound waves to the perceptive apparatus, and would seem to justify the complete removal of this barrier, when the auditory nerve is not diseased. For if the perceptive apparatus is in condition to do its work, while the conducting apparatus is a hindrance instead of a help, the sooner the obstruction is removed, and sound admitted, the better. It should be understood that this statement is made on the supposition that the condition referred to has proved intractable under the usual treatment. Thus it will be seen that the pneumatic otoscope becomes an indispensable factor in determining the precise condition of an organ so hidden away by nature in a deep recess of the head that any auxiliary to our present helps in diagnosis and treatment ought to be welcome. We are not able without it to judge intelligently when so delicate and important an operation as resection of the drum head may be necessary as a last resort. And while I am conscious of the strong sentiment of opposition to such operations, I venture to improve this opportunity to urge the occasional necessity and the justifiableness of such an operation, and to invite the most searching criticism of the logic of this procedure.

AN IMPROVED TONSILOTOME.

Any physician who has had a considerable experience in tonsilotomy, with the various tonsilotomes, will not be likely to deny that these instruments are generally too complicated. They are armed with needles, barbs, or sharp-toothed forceps for piercing the tonsil and dragging it through the fenestra before any cutting is done by the blades. A tonsilotome constructed after



the pattern I have made renders the barbs, etc., unnecessary. It reduces the painfulness of the operation by one-half; it divests the procedure of any danger of an accident to the operator or patient; it makes a skilful and easy operation possible with a minimum amount of experience; it resembles a large folding tongue depressor so closely that children usually offer no opposition to its introduction for the removal of the first tonsil; and it combines strength and compactness with simplicity of construction. It is made on the principle of the guillotine, the blade of which is propelled by the thumb of the same hand which

grasps the handle. The latter is set at such an angle to the shaft as will permit the most perfect coördinate action of the muscles of the hand and arm of the operator. All the work may be done with one hand. This advantage is not a small one for two reasons: The powers of coördination and antagonism of muscles are far more perfectly under control in operating an instrument that requires but one hand, than they are when both hands must coöperate; and one hand of the operator is left free to hold the head of the patient, if necessary, as the dentist does in extracting a tooth. The advantages of a tonsilotome that can be operated entirely by one hand are about the same as in a tooth forceps which does not require two hands to manipulate.

I have had two sizes manufactured, the smaller having a fenestra of the calibre ordinarily found in such instruments, the larger supplied with an aperture larger than the largest Mackenzie tonsilotome, while it is so compactly constructed as to require less space in which to operate. I have used the larger size to extirpate enormously hypertrophied tonsils in children as young as two and one-half years, where it was impossible to insert the Mackenzie instrument of the necessary size. The smaller one is sufficient for the majority of cases, but the fenestra is not capacious enough to admit the bases of the extraordinary glands we occasionally see. It is advisable to remove the whole tonsil, and as the tops only of the largest tonsils can be severed with the smaller instruments, it may be better to have the larger size if but one size is to be kept.

The blade is so protected as to make it impossible to wound the ascending pharyngeal, or the internal carotid artery. The shaft that propels the blade is of such width as to make the use of a gag unnecessary, for it protects the finger of the operator from the patient's teeth, if it is placed in the mouth to ascertain when the fenestra is in such position as to embrace the whole tonsil, as it is necessary for one to do when operating in children with other tonsilotomes. Since I have used this guillotine I have not had my finger bitten, while it was not an uncommon occurrence before to come off second best, as far as pain was concerned. With the shank wide enough to afford protection it is unnecessary to introduce the finger into the mouth, for the teeth and lips cannot close enough to prevent the operator from seeing plainly the field of operation. There is no working in the dark, or fear of damaging structures you do not wish to attack.

The handle is firmly fixed to the shank with a hinge-joint and self-acting spring-lock, so that the fenestra can be pressed down around the base of the gland with any degree of power desired. This feature dispenses with any necessity for hooks, forceps, needles, or barbs for spearing the tonsil. The latter being a soft, fleshy mass, adapts itself to the shape of the fenestra and protrudes through it the instant its base is pressed about. The pain of spearing or tearing the tonsil by toothed or barbed accessories, designed to drag the gland through the fenestra before the blade cuts, excites the most vigorous struggling and resistance on the part of a child. Even when the utmost care has been exercised, the barbs have pierced the soft palate, or the surgeon's finger, instead of the tonsil. Moreover, the gland always comes out with the instrument, the same as though barbs were used. There is another important advantage in having the handle attached to the shank with a hinge provided with an automatic lock, for the cutting extremity of the instrument cannot be thrown out of your control by a disturbance of the coaptation of its parts. The last time I operated with a Mackenzie tonsilotome the child jumped just as I was plăcing the fenestra about the tonsil. The shank revolved upon the handle, leaving the latter in my hand, while the cutting end was entirely displaced and removed from the vicinity of the gland. It is impossible for this improved tonsilotome to play you such a trick. The handle is made of rubber, knurled so as to afford a firm grip, and it contains a concealed spring-lock operated by a convenient thumb-plate. When this is moved downward the hinge-joint is unlocked, and the instrument folds upon itself like a pocket-knife, occupying the space of about and inch and a quarter in width and thickness by six and one-half inches in length.

Another pertinent point that should not be neglected in this age of antisepsis, is the provision for cleansing and disinfecting the three pieces of which the instrument consists. By raising the proximate end of the horizontal top spring of the shaft and swinging it 90° to either side, it becomes disengaged from its lock and it liberates the blade from the shank. This arrangement makes it as simple as possible for taking apart, cleansing and putting together again.

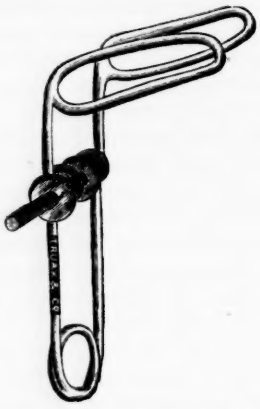
In amputating the apex of a relaxed and elongated uvula the tonsilotome should be used with the handle directed upwards. It should occupy just the reverse position as a uvulatome to the one it occupies when used as a tongue depressor.

Another merit that is not too small to mention is that its simplicity of construction renders it inexpensive.

A NASAL SPECULUM.

The nasal speculum that I have constructed will require but a moment to describe. It is made of spring wire, is self-retaining, and as simple as such a thing can be made. The surfaces that come in contact with the mucous membrane are flattened so as to relieve the pressure of its accompanying discomfort as far as possible. The amount of pressure exerted by expansion can be accurately modified by the counter thumb-screws.

When the speculum is in position, entirely within the vestibule, for examination or operation the handle is directed at such an angle as to be out of the way of the operator. The tendency to slip out of place is overcome by its lightness, and by a nice adjustment of its set-nuts.



A nasal speculum is a disagreeable tool at best, on account of the sensitiveness of the nasal cavities, but this one carries as little discomfort with it as any effective speculum can.

These instruments are manufactured for me by Charles Truax & Co., of Chicago.

719 West Adams Street.

OOPHORECTOMY FOR PROLAPSE OF RIGHT OVARY INTO DOUGLAS' CUL-DE-SAC.

Read before the Medical Society of the District of Columbia, April 18, 1888.

BY J. F. HARTIGAN, M.D.,
OF WASHINGTON, D. C.

This was a very unpromising case. The patient, æt. 36, unmarried, has been under my treatment almost constantly for the past nine years. When she was only a month old her mother died of phthisis. Being a puny, delicate, bottle-fed infant, she was raised with great difficulty. In early childhood she was a subject of chorea.

I was first called to see her in January, 1879, for pleuritis and pneumonia. In the summer of the same year she had intermittent and typhoid fever, the anæmia following leading to ascites and dropsy of pericardium. On account of several attacks of hæmoptysis she went to England in November, 1879, on a visit to relatives, and stayed fifteen months. The trip was partly beneficial, although while away she had three hæmorrhages. Several lighter ones occurred after her return, but with the exception of the occasional coloring of the sputum, none have occurred for five or six years. These hæmorrhages were not vicarious, as they came on without regard to the periods of menstruation; besides, the other symptoms, as cough, expectoration, etc., pointed to manifest lung disease. About the year 1884 nasal catarrh appeared, associated with endometritis and hyperplasia of the cervix, which would yield to treatment for a while, but return from time to time. Another circumstance in the case, which may be well to mention, occurred last October. After a heavy dinner she said she would have to sit down, complained of a swimming of the head, everything appearing dark before her, and immediately lost her senses and slid off the chair. The servant in her alarm dragged her to bed by the shoulder, dislocating it. This was easily reduced upon the administration of ether, although several weeks elapsed before she had the full use of her arm.

Her first pain in right inguinal region dates back to October, 1886, when, as she states, while riding in a street car she was severely jolted by the car running off the track; pain followed immediately, which subsided the same night, recurring when she walked or rode.

In May last she suffered a severe exacerbation while in Virginia. On my return from abroad last October I found her practically bedridden, with marked evidence of phthisis. Under the use of cod-liver oil and other building-up treatment she improved to a remarkable extent, but still complained of a dull sickening pain in right inguinal region. This was aggravated by any attempt to walk across the room, upon defecation, and before, during or after menstruation. I now for the first time discovered retroversion of the uterus, and on digital examination, prolapse of the right ovary into Douglas' cul-de-sac. How long the latter condition existed I am unable to say, but probably its starting point was in October, 1886, as already mentioned; the symptoms in the interim being mitigated principally by rest in the recumbent position. It is needless to say that all palliatives, such as bromide of potassium, counter-irritation, hot water injections, and endeavor at reposition by the genupectoral method with lint soaked in glycerine, proved of no avail. Even different kinds of pessaries seemed to aggravate rather than relieve her symptoms, so that hypodermic injections of morphia, and by the stomach, became the rule. These would only give temporary relief, however, the effects wearing off in two or three hours.

At last oöphorectomy was proposed as holding out the last chance of relief from her deplorable condition. To this she and her father readily consented. Accordingly on March 31st I performed the operation at Providence Hospital, assisted by Dr. Joseph Taber Johnson, whose kindness and valuable advice I desire here to acknowledge. There were also present Drs. Bulkley, Crook, H. L. E. Johnson and Osmun, Dr. Cole, the House physician, administering the ether. After the usual incision in the median line, not

much difficulty was experienced in reaching the ovary, and separating it from its adhesions behind the cervix. No oozing of the pedicle followed the removal of the organ with the tube, which, in addition to the prolapse, presented a hæmatoma partially organized, apparently involving one-third of its substance, and commencing cystic degeneration. The patient made a fine recovery, chatting and laughing the next day. Only once the temperature reached 100°. On removing the stitches the seventh day not a particle of pus was seen anywhere; everything was perfectly dry, there being primary union along the whole line of incision. She has had no pain whatever since, has menstruated normally, commencing the third day, and although it lasted five days she would not have been conscious of the fact had not the nurse called her attention to the napkins. Her previous sickness was on March 13th. The night following the operation there was some pain in the line of incision, and nausea, but no morphia or medicine of any kind, except for her bowels, has been administered. It is now eighteen days since the operation. She is sitting up without any pain, although for months previously she was confined to bed on this account. Instead of laying awake at night racked with suffering, she sleeps soundly, relishes her food, and, to use her own language, she intends hereafter to enjoy life. I will keep her in the hospital yet, however, for five or six weeks, hoping that all chances of a return of the old lung difficulty will subside.

The results in this case so far are very flattering, and beyond reasonable expectation. It is also interesting from the fact that the displacement was on the right side, about 25 per cent. only into Douglas' cul-de-sac being found in this situation, the large majority of those reported being on the left side, for well known anatomical reasons.

I may add in closing, the satisfaction that any one of the three conditions presented by the specimen, viz., the prolapse, the hæmatoma, and cystic degeneration, fully justified the operation.

ON THE TREATMENT OF LARYNGEAL AND PULMONARY PHTHISIS BY A SPRAY OF HOT VASELINE IN CONJUNCTION WITH MENTHOL AND IODOFORM.

BY HOWARD SMITH, M.D.,
OF CHARLESTOWN, MASS.

For two years the writer has employed a spray of pure hot vaseline, medicated with menthol, iodoform and ol. eucalyptus, singly or in combination, in the treatment of laryngeal and pulmonary phthisis, with results which warrant him in describing the method with some detail and in asking a trial of it at the hands of other practitioners.

The employment of fluid cosmoline is best avoided, because it is frequently irritating and somewhat gummy, while the translucent, semi-solid product of the Chesebrough Mfg. Co. is pure, unchangeable and perfectly bland.

In order to conveniently warm and spray this vaseline the atomizer figured above was devised, which being charged, is held over a lamp or other source of heat until the contents are thoroughly liquefied and the nozzle has become as warm as can be conveniently borne by the patient, an essential point which is believed to contribute much towards a successful result.

One nostril is then closed by the nozzle of the instrument, and the rubber bulb is worked vigorously during inspiration, by which the spray is drawn deeply into the lungs, as is evidenced by the sensations of the patient and the reappearance of the spray upon the expired breath.

The nasal passages and bronchial tubes being thus coated, the inspired air must, for some time afterwards, be impregnated with any volatile substance with which the vaseline is medicated, and thus the remedy is carried still further along the respiratory tract.

Rosenberg, of Berlin, has obtained excellent results in the diseases mentioned from endotracheal injections of a solution of menthol in olive oil, but the writer considers a warm spray of mentholated vaseline preferable, particularly because the former requires the attendance of the physician twice daily, while the latter can be administered by the patient himself.

He remarks upon the antiseptic properties of menthol, having found it, in a gaseous form, to be destructive to pure cultivations of the tubercle bacillus, and also states that the well known anæsthetic effect of the drug is cumulative; that is, lasting for a longer period after each injection, and enables the patient with laryngeal phthisis to eat at once without pain. (See article by Beehay in *Braithwaite* for July, 1888.) The strength employed by him is 20 per cent., but 1.5 per cent. has been found enough for use in the atomizer by the patient himself.

Iodoform was several years ago much employed in the treatment of pulmonary phthisis, dissolved in ol. terebinth and sprayed by means of the steam atomizer. The results were encouraging, but the combination was extremely disagreeable to patients and attendants. Cod-liver oil is an excel-

lent solvent for iodoform, and when sprayed floats in the atmosphere of a room in a remarkable way; but, upon the whole, pure vaseline is a better menstruum and, with the addition of a few drops of ol. eucalyptus, the odor is quite bearable and the results sometimes more satisfactory than those obtained from menthol. The formula used is as follows:

℞. Iodoformi pulv. . . . . grs. x.
Ol. eucalypti. . . . . gtt v.
"Vaseline". . . . . ʒss.
M.

Both menthol and iodoform are antiseptic and anæsthetic, thus fulfilling the two very important indications of allaying cough and modifying expectoration, but in addition have points of difference which will influence the selection of one or the other. Menthol is stimulant to the vascular tissues and promotes absorption, while iodoform possesses valuable alterative properties, hence it is better to select one and keep the other in reserve, as the antiseptic and anæsthetic properties of either are usually sufficient. The addition of cocaine may be necessary in cases of laryngeal phthisis, but one of the other two remedies will usually be found capable of affording, in cases of pulmonary phthisis, great relief from cough, and of diminishing expectoration and improving its character.

Space can hardly be claimed for more elaboration in description of the method of treatment advocated here, and all references to cases may be omitted, as the remedies spoken of have had their respective values determined, the only point which this communication is intended to emphasize being the employment of a spray of hot vaseline as a menstruum.

MEDICAL PROGRESS.

SURGICAL TREATMENT OF SUPPURATING VENEREAL BUBO.—KARL SZADEK thus describes the treatment carried out at the Military Hospital at Kiew:

In beginning bubo, so long as there is no fluctuation, or redness of the skin, simply rest and prevention of irritation or injury to the inguinal region, at the same time appropriate treatment is employed for the soft sore.

If the skin is reddened but fluctuation not well established over the abscess, hot compresses, made with a carbolic solution, are to be applied until there is established complete suppuration of the swelling. Painting with the tincture of iodine does not meet with favor. As soon as fluctuation is made out in the whole abscess and it is ripe, a surgical opening is necessary. A mild degree of chloroform narcosis is recommended, as the necessary steps are very painful. After most careful cleansing of the skin in the inguinal and genital regions and the thigh, as well with soap, brush and warm water and shaving off the hair of the pubes, the operation field is to be disinfected with a five per cent. carbolic, or a one per cent. sublimate solution. A free opening is then made, in most cases parallel with Poupart's ligament, by means of a small bistoury. The incision must correspond with the length of the bubo. After evacuating the contents any recesses or sinuses are to be separated by means of a pair of scissors and all glands, both those which have suppurated and others which are enlarged, must be removed with the finger, and remnants of glands and firm granulation tissue scraped out with Volkmann's spoon. If an affected gland does not yield, its capsule must be opened with the knife and its contents removed. If the cutaneous covering is destroyed in a large area it is best to cut it away with scissors. It was only necessary in a single case to apply a ligature on account of hæmorrhage. After the bleeding has been stopped with cotton-tampons, the cavity is to be washed out with a corrosive sublimate solution and the whole cavity sprinkled with iodoform alone or mixed with alum, packed with iodoform gauze, and an occlusive dressing applied. The latter consists of a few layers of sublimate gauze and salicylic or sublimate cotton, upon which a mass of jute or tow is placed. The whole is then covered with mackintosh or glazed paper and fixed with turns of a moist, wide dressing bandage.

The first permanent dressing, when well applied and the patient keeps quiet, can remain for from two to five days. If it becomes soaked with the secretions it may have to be changed earlier. In the second dressing the edges of the wound are washed with a five per cent. carbolic or a one per cent. sublimate solution, the wound covered again with iodoform without washing out the cavity or applying tampons, and a fresh dressing applied. This and following dressings can, with few exceptions, be left from five to ten days and changed only if oozing is noticed from the edges. Besides the 274 chancroidal buboes there were treated during five years twenty-six syphilitic buboes, and twelve times the inguinal glands were removed by operation on account of tubercular adenitis. The duration of treatment of chancroidal buboes averaged thirty days. Complications with phlegmon diphtheria. Chancroidal destruction of the walls and edges, etc., were never encountered in the acute or subacute chancroidal buboes. In five cases erysipelas occurred, but it seemed to have little influence on the course of the result as healing always took place. In twelve cases eczema of the neighborboring parts came on, delaying healing from ten to twenty days, as the dressing had to be frequently changed. The course of the opened suppurating syphilitic buboes, which were usually not scraped out but had

the glands respected, was usually favorable and no complications occurred. In tuberculous adenitis the wounds healed kindly and for the most part quickly when the individual was strong and otherwise healthy, after extensive scraping out and extirpation of the glands. In anæmic and broken down patients, the healing was slower. Although iodoform was employed in large quantities, intoxication from it was never witnessed. In all the varieties the scar was as a rule smooth, even often linear, and after a time scarcely noticeable.—*Journal of Cutaneous and Genito-Urinary Diseases*, September, 1888.

CARDIAC HYPERTROPHY WITH VARIABLE MURMURS; PROBABLE OCCLUSION OF THE THORACIC AORTA.—The following case came under the care of SIR HUGH BEEVOR and DR. DUFFIN, at King's College Hospital, London:

W. B., æt. 24, was admitted into the hospital complaining of pain in the right side, with a temperature of 100°. These symptoms left him after a few days. He was a soldier. He had previously had very good health but, after two years' service, was discharged invalided. Through the kindness of the medical department at the Horse Guards, his health-sheet was obtained, where he is described, on enlistment, as a laborer with good physical development. He was sent to India, where he was in hospital on four occasions for diarrhœa and dysentery, spending 120 days out of 15 months in hospital; he was then sent home to Netley and, after 14 weeks, discharged for heart disease. Habits intemperate. His brothers and sisters are alive and healthy; the father and mother died of tumor. The chest showed a fulness below the right axilla, and strong pulsation could be felt there, and be traced up into the axilla; on the back large arteries could be traced on either side, from the level of the first dorsal vertebræ down to the sixth and fifth on right and left side; and corresponding to the pulsation in the right axilla, a pulsation was felt in the left; the arteries ran down to the ninth and eighth intercostal spaces respectively. The right subclavian was larger than the left; an artery was felt under the right costal cartilages, near the sternum. In the abdomen, the abdominal aorta could not be felt pulsating, only the right external iliac; in the lower limbs the femoral arteries could not be felt pulsating, only the right posterior tibial artery. The pulse at the wrist was 100, high tension, and the artery large; there was also marked pulsation to be felt behind the manubrium sterni. There was visible præcordial pulsation in the fourth and fifth interspaces, but the apex beat was felt most in the sixth, at the nipple line; præcordial dulness was increased. On auscultation, three distinct areas of systolic murmur were noted; at the base, to the right of the sternum, in the second and third interspaces, and to the left in the second and all the first interspace; below, a systolic murmur was heard over the area of cardiac dulness, and across the sternum to the right costal cartilages. The character of the murmur was different at base and below; at the base, on the right, it was very whizzing in character, and in time came just before the second sound; below, on the left, it resembled an exocardial murmur; on the right it was louder, and of a different character. He was examined at different times over a period of nine months; on some occasions there was no murmur at all at the base, and a limitation of the usual area was frequent, which was shown on the chest by the double contour of the areas marked.

In this case it seemed that the posterior scapular, the subscapular, and the internal mammary arteries had taken the chief part in forming anastomoses between the arch of the aorta and the aorta in the thorax, with the effect of almost obliterating all pulse in the arteries of the lower extremities. No other effect was noted, with, perhaps, the exception of signs of high blood pressure in the renal arteries, the urine being pale and of low specific gravity, with no albumen, and he said it was customary with him to rise once or twice at night to pass water. There seemed to be no evidence, on auscultation, by which the murmurs could be assigned to arterial anastomoses solely, though one area extended down over the cartilages, beneath which an artery could be felt; on the other hand, he said he had been laid up since leaving the army, a week at a time, with severe præcordial pain, and in the fifth interspace the murmur was similar to exocardial murmurs.

This anomalous case could readily escape observation in an ordinary examination; for unless the stethoscope was placed over one of the arteries in the back, there was nothing but the fulness inside the right axilla to cause special attention. Though his heart was carefully examined for some days after admission, it was the fulness and slightly diminished resonance being investigated that called attention to the anastomoses.—*Brit. Med. Jour.*, August 4, 1888.

TREATMENT OF FRACTURE OF THE PATELLA BY SUTURE.—DR. A. R. JENKINS, of Henderson, Ky., proposes to put the skin on the greatest stretch and to cut down on the fragments by a transverse incision—whether the skin be drawn up or down depending on the amount of separation of the upper fragment. Naturally the incision would be made above if there was much retraction; or if there be much contusion of tissue on or below the bone, the incision is made above in the sound tissue. Through either of these openings the fragments could be freed alternately, and inspected, then sawn, drilled or sutured as might be; or an hæmarthron or fluids could here be removed from the joint, the capsular ligament sewn, etc. An assistant, in the meantime, keeps

the skin stretched as necessary, either with fingers, retractors, or Muzeaux forceps. Of course the strictest antiseptic prophylaxis and treatment should attend throughout.

In cases of compound fracture of the patella, with much destruction or pulping of the skin, it is suggested that the doubtful tissue be excised, and that the sound skin be drawn over the fragments. Compensation for the resected skin could be obtained by incising a large Y or an arc above or below the resection wound and far enough removed to be safe, the concavity of the arc or the fork of the Y looking towards the wound, or by a tenotomy of the tensor vaginæ femoris muscle.

Furthermore, it can be said for this method that it would allow of the extra-articular methods of suture, as employed by Volkmann and Riedel, or the intra-articular fastening of Kocher. Either of these methods could be used after the toilet of the patella was complete; all that is then necessary after the skin is relaxed, and the parts *in statu quo ante*, is to make a counter opening at the opposite end of the patella, and from these two openings the catgut or silver could be manipulated by an armed needle around or beneath the patella (subcutaneous or subpatellar). In laying the last stitches in closing the cutaneous wound as a refinement of technique, wounding of the skin could be avoided by the continuous sunken catgut stitch, thus eliminating infection through the skin appendages.

The particular claims for the method are that it admits of an almost subcutaneous exploration and operation on the diastasis and in the joint, and that it may even progress like the ideal subcutaneous wound to healing. It involves normal and less suspicious tissues. It is consistent to true plastic surgery, and to the anatomy and physiology of the parts involved. By making a proper use of the elasticity of the skin in this situation, the wound in most cases need be but small for the field of inspection and operation, owing to elasticity of the skin, can be moved from one part to another without the necessity of essentially enlarging the original cut. In this it resembles the laparotomy technique of Lawson Tait, in so far that it is an endeavor to bring the entrance operation wound to the *minimum*.—*Annals of Surg.*, September, 1888.

MERCURIC BICHLORIDE IN HYPOPYON KERATITIS AND OTHER CORNEAL DISEASES.—DR. R. H. CHILTON says:

In the application of this remedy to eyes with hypopyon, I do not think it necessary to keep the eyes in constant contact with a solution of it, but think a thorough application to the eyeball, by inversion of the lid, two or three times a day by the physician, then direct the patient to use it every three hours, is sufficient. The result is generally about the same — that is, to check sloughing and suppuration within twenty-four hours. I agree with Dr. Hotz in believing the resulting cicatrix in these cases to be much less than when treated by other remedies. In all cases where sloughing has occurred to the extent of perforation, or where it is necessary to make a paracentesis, I think it is advisable to wash out the anterior chamber with a weak solution, the strength to be about 1 to 20,000. This will prevent a further invasion of the disease into the chamber, and often prevent disease of the iris from complicating the already serious trouble. Any ulcerated surface, without secretion of recent occurrence, will soon heal, and we obtain this condition perfectly by the use of mercuric bichloride.

In the treatment of a recent case of gonorrhœal ophthalmia, I was pleased, not only with its action in at once arresting the progress of a sloughing ulcer in one eye, but in aborting the disease in the other. In the latter, the treatment was begun before the disease had involved the whole of the surface of the conjunctiva, yet suppuration was abundant from the lower palpebral membrane. The disease succumbed in three or four days. In the sloughing eye the disease never progressed after the first twelve hours, and the suppuration was materially checked from the lids at the same time.

The use of this preparation is well borne in hypopyon keratitis; I have thought better than in eyes without ulceration. It is applicable in nearly all cases, while preparations of mercury in the form of an ointment are totally inadmissible from their irritating effect. I have never had occasion to make a paracentesis when I could get the eye fully under the influence of this drug before the accumulation of pus took place. In its application I use a ½ per cent. solution of cocaine to modify its stimulating action. In other forms of corneal ulcer I have found it superior to other preparations of mercury. In ulcerative keratitis, phlyctenular disease, and corneal ulcer from granular inflammation, I have found it equally as beneficial as in hypopyon.—*Texas Courier-Record of Medicine*, August, 1888.

SALICYLATE OF BISMUTH, combining the astringent properties of bismuth and the disinfecting properties of salicylic acid, has been used by EHRING in a large number of cases of digestive disturbance in children. It is an excellent remedy for gastro-intestinal catarrhs depending on abnormal fermentation, especially if it be administered in conjunction with lavage (washing out of the stomach and intestines). Ehring uses the following formula:

Salicylate of bismuth	ʒ j
Glycerine	ʒ ss
Water, ad.	ʒ iv ℥

S.—A drachm, more or less according to age, every two hours.—*Archiv für Kinderheilkunde*, Bd. ix, S. 90.

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SATURDAY, SEPTEMBER 22, 1888.

CLASSIFICATION OF DISEASES BY COMPARATIVE NOSOLOGY.

It was in every way appropriate that the admirable address of Dr. Gairdner before the British Medical Association should have been followed by the Address in Medicine of DR. T. CLIFFORD ALLBUTT, on "The Classification of Diseases by Means of Comparative Nosology." Reading this after the address of Dr. Gairdner, one is inclined to think at times that Dr. Allbutt's address is a first chapter after Dr. Gairdner's masterly introduction—a rather special application of the general principles laid down in the President's Address. It was such an address as could be written only by a physician-naturalist — a *Naturforscher*. The keystone may be said to be evolution—as applied to disease, and one who reads it will do well to read Mr. Pittfield Mitchell's recent work on "Dissolution and Evolution and the Science of Medicine."

What is meant by "the classification of diseases by means of comparative nosology?" To classify things is to think of them in groups, these groups being in such order as best conduces to the ascertainment and remembrance of their laws. Scientific classification, then, must be founded on a natural method and on natural affinities, and must be the expression of them. We are all familiar with chemical classification, the groups and series, which may be regarded as the simplest classification of substances apparently unlike in some or many particulars. Passing to the animal world, who, in making an artificial and unscientific classification, would place the kangaroo and the opossum in the same class, and who, in the same classification, would not class together the flying-squirrel and the flying-squirrel-like marsupial of New South Wales? "A scientific classification," said Dr. Allbutt more than twenty years ago, "disregards the obvious as such, and may place together objects at first sight distant and disparate." We should not think of diseases as isolated disturbances, but that many of them are phases of certain periods of bodily development.

In his article on the "Classification of Disease," in the second volume of Guy's Hospital Reports, Dr. Allbutt said: Life consists of a series of processes which together constitute varieties or modes of growth, that is, health, scrofula, syphilis, rheumatism, gout, rickets, tuberculosis, etc. Diseases, taken severally, are often members of such series, which series may be constructed by a survey, not only of the individual, but of his collateral kin and of his ancestry, and also of other orders of the animal and vegetable world, a survey which cannot be made until comparative nosology becomes a recognized branch of our science." And again, in an address in 1882, Dr. Allbutt said: "To find new arms against disease, we must have a truer conception than we mostly have of the genesis of disease. No mere enumeration of symptoms or of pathological detail will suffice for this, nor even a full description of diseases severally. We have to work out the genetic affinities of diseases, their origins, parent stems, and alliances, as well as their issues. We can have no complete therapeutics until the science of comparative nosology is in a great measure constructed—a science as yet scarcely begun." Thus we see that the address now under discussion is the outgrowth of almost a quarter of a century of thought. In this time something has been done in the ways he indicates. About a quarter of a century ago, in 1864, Dr. Laycock showed that some basis of organic classification of disease was to be sought in a comparison of diseases as they originate in the several layers of the embryo, and his suggestion has thrown a great deal of light upon the kinship and genesis of neoplasms. Veterinary science has given and will give new light, but it will advance us only a step. In human nosology but little remains, and when we shal

have all that veterinary nosology can give we will have but two links in the zoocentric or biocentric chain. Perhaps to complete it we must wait patiently for some Darwin, "a machine for grinding general laws out of large collections of facts."

"Perhaps," says Dr. Laycock, "no morbid change happens to man which is not a normal process in other organisms, and the nature of which may be known by a study of such analogous normal changes." An example of this, says Dr. Allbutt, is the shedding antler of the deer, which is a huge sequestrum, a case of normal necrosis. We are in the position, he says, of anatomists before the time of Cuvier and von Baer. A minute clinical study of human nosology has been made, but the parts into which disease has been dissected are not the elements out of which it has grown. Nearly all remains to be done in tracing the homologies of disease throughout the animal and vegetable world. Its phenomena must be studied under the various and simpler conditions of lower organisms, and its development traced upwards through the macrocosm of all life and through the microcosm of the embryo. Its variations through space and under changed climatic conditions must be studied, and the effects of change of function upon change of structure must be noted as these changes pass, by hereditary transmission, from the dynamic to the static form, tabulating pathological sequences in family, race or country, so as to detect the latent affinities of diseases apparently not related. As an introductory to this study may be recommended Quatrefages' work on "The Human Species."

Dr. Allbutt then describes the four methods, the *hereditary*, the *historical*, the *geographical* and the *experimental*, that must be pursued in order to attain to a true system of classification of diseases of men, animals, and plants, on a basis of affinity. These methods must be pursued at the same time; they cannot be logically dissociated. We are, as it were, scarcely at the threshold of any one of these methods, as Clodd says of the significance of the doctrine of heredity. How little does any one of us know of his family history, even in the male line, for a comparatively short time, and how infinitely small the knowledge of the vast expansion backwards of the family tree. Yet for complete knowledge the hereditary nosology of a whole nation is inadequate; we must go with our inquiries into the diseases of all living things. As in all studies, the historical method in nosology leads to the philosophical, and here we may be said to be in the glacial period of our knowledge. How do changes of function become, in generations, changes of structure, variations into less useful or "morbid" function, and this soonest in the highest and least organized parts, the nervous system, the adapter and organizer? We know only the fact, not the *how* and *why*.

And after having carefully studied, so far as we can, the heredity and history of disease, and turn to the geographical method for information, we are brought face to face with the question, How have the morbid varieties of *man* arisen? For the answer to this, which is only a part of the question, How have the morbid varieties of living things arisen? we must seek the answer in the past. We must work in areas long undisturbed, says Dr. Allbutt, and must register in these the phenomena of morbid variation with the qualities of soil, aspect, seasons, atmosphere, food products, and so forth. Nations must not be confounded with races, nor kingdoms with physiological areas. Said Boudin: "As every country has its characteristic vegetable kingdom and animal kingdom, so it has its pathological kingdom." As illustrating the fact that no one of the methods of classification spoken of can be relied upon for complete nosological data, may be mentioned malformations of the jaws, which are becoming more common in America, especially in those portions of the continent peopled by several different races. And to show the value of comparative nosology, in clearing up this one matter we must get a part of the answer from the *niata* cattle of South America; a part from certain sheep of Central Asia, which have, normally, steatopygia; a part from the difference between the head of the domestic pig and the wild boar, and so on until the whole world has been sought over; and even then human craniology must be studied to complete the evidence.

Finally, with the other methods, there is the experimental. Like the other methods, the experimental shows that clinical types cannot be a basis of nosological classification. The work being done in experimental medicine is increasing, and is certainly productive of interesting results. Pharmacological experiment has shown that poisons vary in their clinical effects by leaps and bounds,

as musical flames respond to scales of vibration; that poisoning by extractives in general is attended by hyperthermia, and poisoning by animal alkaloids by hypothermia; that the distinctive action of the lower members of the fatty series is their stimulant and anæsthetic action on the nerve centres, and that the members of the aromatic series affect the nervous system, but the motor more than the sensory centres. With curare we may reduce the mammal to a cold-blooded animal, whose temperature varies with the atmosphere. Space does not permit the further pursuance of this subject.

HOW THE OPIUM HABIT IS ACQUIRED.

MR. VIRGIL G. EATON tells the public, in the September number of the *Popular Science Monthly*, how the opium habit is acquired. He is the writer that frightened the people of the country about two years ago by prophesying that they would all be bald in about a dozen centuries. He now predicts that unless people develop their muscles, rest their nerves, and send the family doctor on a vacation, the residents of our American cities will be all opium-slaves.

For the past year or more Mr. Eaton has "studied the growth of the opium-habit in Boston." He says it is increasing rapidly, and from the "tell-tale pallor" of the faces he sees he is sure the habit is claiming more slaves every day. In order to approximate to the amount of opium in its various forms used in Boston, Mr. Eaton "made a thorough scrutiny of the physicians' recipes left at the drug-stores to be filled." This is the way that one would expect an unscientific and unthinking man to make such an investigation. Having set out to find a thing, he finds it—and is duly surprised. He says he found opium and its alkaloids used by physicians for every ailment that the flesh is heir to, and then he enumerates a list of affections for which he learned they are used. It is pertinent to inquire whether Boston physicians are in the habit of writing out a diagnosis on each prescription. One would infer as much from Mr. Eaton's article. From his investigations as to the number of prescriptions containing morphine, and the number of these refilled, he is satisfied that it was the opiate qualities of the medicine that caused the renewal. As regards the proportion of opium habitués that begin by taking medicines containing opiates, he places it as fully 25 per cent.—perhaps more. This is only one in four, on his own estimate. Then, within the space of a page he says: "The parties who are responsible for the increase of the habit are the physicians who give the prescriptions." Now if only one opium habitué in four acquired his habit from medicines ordered by a physician, the other three must have acquired it in some other way, not attributable to the act of a physician. How, then, can the physician be responsible for the increase of the habit, even admitting that they are responsible for one case in four?

Mr. Eaton also tells how physicians prescribe opium. "In these days of great mental strain, when men take their business home with them and think of it from waking to sleeping, the nerves are the first to feel the effects of over-work. Opium effects immediate relief, and the doctors, knowing this, and wishing to stand well with their patients, prescribe it more and more. Their design is to effect a cure." This arrant nonsense in the *Popular Science Monthly*! Mr. Eaton says that two means of preventing the spread of the habit suggest themselves to every thoughtful person: The *first* is to pass a law that no prescription containing opium or its preparations can be filled more than once without having the physician renew it. If this and the registration safeguards were not enough, Mr. Eaton suggests that physicians could be fined for administering opiates save in exceptional cases. The *second*, is to keep the body in such a state that it will not require sedatives or stimulants. People, he says, should forsake medicine and take to the gymnasium, and thus the family doctor, who means well, but cannot resist the tendencies of the age, can take a protracted vacation. All of which is doubtless well meant.

Had Mr. Eaton taken the trouble or known how to make more careful investigation of the subject about which he has succeeded in confusing himself, he would have consulted some of the back numbers of the *Boston Journal of Health*, with the assistance of which he might have written an article at once sensible and interesting. Had he stopped to consider that one-fourth of a class is less than three-fourths, he would not have written an article that can have no other effect than to mislead the public. He but barely men-

tions the fact that the proprietary or "patent" medicines that have the largest sales are "those containing opiates." He also mentions that opium joints and opium-smoking are on the increase. He says nothing of the fact that "nervines," and such compounds as "Scotch Oats Essence" contain opium, and probably he does not know that of the twenty or more varieties of "opium cures" made and for sale in this country, *all contain opium* except one, as shown by the analyses of Dr. B. F. Davenport, of Mr. Eaton's own City—Boston. Mr. Eaton takes no account of the fact that the "patent" medicines of the worst grade are the most popular, and their popularity depends on the amount of alcohol or morphine they contain.

Mr. Eaton's paper reminds one of the assertion that a large proportion of habitual and occasional inebriates owe their disease to the alcohol that physicians have prescribed. This assertion has been recently made by a prominent clergyman, whose name may be found among the endorsers of a "patent" compound that contains more alcohol than pure sherry. He thunders from the pulpits against the use of alcoholic liquors in any and every form, and writes an endorsement for a "pure, non-alcoholic tonic" that contains 29 per cent. of alcohol. Totally blinded by the beam in his own eye, he lectures his brethren on the motes in their eyes. The medical profession, we have no doubt, will endorse Mr. Eaton's proposition to fine physicians for prescribing opium when it is not needed, if he will accept an amendment: Fine druggists and others that sell "patent" medicines containing opium or its preparations or alcohol, or any substance dangerous to health or of no value in the treatment of disease, or that are not worth their price; and incarcerate the manufacturers in State's prison for not less than five years, along with the people that endorse their preparations, knowing nothing of them. This done, Mr. Eaton will probably find that physicians are not responsible for the increase of the opium-habit.

INTUBATION AND DEGLUTITION.

It is well known to all who have given attention to the subject, that one of the greatest difficulties attending intubation of the larynx as a substitute for tracheotomy, is the tendency of food and drink to enter the larynx through the tube, rendering it, in some cases, impracticable to administer sufficient nourishment to sustain the patient. At the regular meeting of the Chicago Medical Society, September 3, 1888, Professor Wm. E. Casselberry read a short paper embracing an account of three cases of intubation of the larynx that had come under his observation, in which he had succeeded in administering water, milk, and other liquid nourishment abundantly, by simply placing the patient in the dorsal position, with the head and shoulders inclined downwards at least sixty degrees, and letting them take the liquid through a tube. While inclined in that position, the patients swallowed with ease and without the slightest tendency to pass any part of the liquid into the larynx. His first case was attended with Dr. Frank Carey about June 1, 1888. Since hearing of the good results obtained in this case, several other members of the Society had tried the same method with equal success. In none of the cases thus far reported, has the great inclination of the head and shoulders downward, created any tendency to displace the tube, or to cause undue congestion of the vessels of the brain. Professor Casselberry stated, in closing the discussion, that the patient should not be raised to a horizontal or upright position too quick after stopping the food or drink lest there might be remaining in the mouth or fauces enough to gravitate through the tube in the larynx and occasion coughing at once. He said to obviate this it was necessary to induce the patient to perform the act of deglutition two or three times after taking away the nourishment or drink and before allowing the head to be elevated.

YELLOW FEVER IN FLORIDA.

The yellow fever that manifested itself to a limited extent in two or three places in Florida last year, has renewed its invasion the present season, and assumed an important epidemic form in Jacksonville and some smaller places. The whole number of cases reported as having occurred in Jacksonville to this date, September 17, is 1047, and the number of deaths, 133, which indicates a mild type of the disease. Liberal contributions are being made in aid of the suffering communities; and this should be continued, especially by the people of the North, until the

plague ceases. If the Health Boards and afflicted municipalities are supplied with sufficient means, not only provisions, but plenty of nurses and doctors can be had from the South, who are already acclimated and familiar with the scourge. But experience has abundantly demonstrated that such nurses and doctors as go from the North wholly unacclimated, directly into the fever locality, almost certainly speedily succumb to the disease, and thereby become an additional burden instead of a help to the afflicted communities.

EDITORIAL NOTES.

A CONGRESS of Polish medical men and scientists was held recently at Lemberg. About 500 members were present.

ALUM IN FURUNCLES OF THE EAR.—Grash reports good results from alum solutions in furuncles in and about the ear.

RAILWAY SANITARY INSPECTION.—Those interested in this field will do well to read the paper of DR. R. HARVEY REED, of Mansfield, Ohio, on "The Sanitary Inspection of Passenger Coaches," read at the Ninth International Congress, and now reprinted in a brochure.

LEAD-POISONING has become less frequent in the Department of the Seine, the hygienic measures enforced for several years having diminished the number of cases. The Committee on Public Hygiene recommend that powdered white lead be replaced by white lead mixed with oil, which is not dangerous.

ABSENCE OF BOTH MAMMÆ in a female, aged 21 years, is recorded by DR. W. WYLIE, of Skipton, England. A small mole exists near where the right nipple should be found, and the pectoral muscle seems to be quite bare of adipose tissue in that region. Some three months ago the woman gave birth to a child, and there has been no sympathetic pain nor uneasiness of any kind in the pectoral region.

MEASURES AGAINST SMALLPOX.—The Comité Consultif d'Hygiene Publique de France, after hearing the report of Dr. Roux in regard to the epidemic in the Department of Morbihan, made the following recommendations: Isolation of patients; disinfection of linen, mattresses, and clothes by means of portable steam stoves; the use of sulphuric acid and antiseptic sprays in the dwellings; vaccination of all the inhabitants with animal vaccine; and special instruction promulgated by means of cards.

SPECIALISM IN FRANCE.—The Council of the Faculty of Medicine of Paris has approved the report of Dr. Damaschino, who urges that three *agrégés* (assistant professors) out of five should be required to take up specialties immediately on their *agrégation*, and thus official sanction has been given to specialties, in France at least. The specialties to be chosen comprise ophthalmology, experimental and comparative pathology, hygiene, forensic medicine, mental diseases, and cutaneous diseases and syphilitic disorders. Therapeutics, nervous diseases, and diseases of children will be added to the list subsequently.

SUIT AGAINST DR. VANDERPOELE.—Dr. Samuel C. Vanderpoele, Jr., of New York, has a singular lawsuit against him. Three weeks ago he diagnosticated the illness of a little daughter of Charles Dawson, of Syracuse, N. Y., who was spending some time with his family at the Larkins House, Watch Hill, L. I., as scarlet fever. Mr. Larkins, the proprietor, relying on the diagnosis of another physician, denied that the child was suffering from the disease, and the Dawson family remained at the hotel. The other guests, hearing of Dr. Vanderpoele's diagnosis, left the place. Mr. Larkins immediately brought suit in Rhode Island against Dr. Vanderpoele for $12,000 damages. Dr. Vanderpoele says that his diagnosis was correct and that he has been sustained by the Board of Health of Westerly, R. I., and some prominent physicians. Dr. Vanderpoele intends fighting the suit. He says he was subjected to great personal inconvenience by the action of Mr. Larkins, who, as soon as he brought the suit, had an order issued for Dr. Vanderpoele's arrest. The Sheriff arrived at the Watch Hill House, a rival establishment, where the physician was staying, and proceeded to execute the order. Bail was fixed at a large figure, but several of the cottagers offered at once to go on the doctor's bond. The Sheriff, however, Dr. Vanderpoele says, made paltry objections to each of them, and stated that he intended to lock the doctor up, but satisfactory bail was finally furnished. Dr. Vanderpoele says he will in turn sue the hotel man for damages.

SOCIETY PROCEEDINGS.

Congress of American Physicians and Surgeons.

THE PRESIDENT'S ADDRESS.

Delivered at Washington, D. C., September 20, 1888.

ON MEDICAL MUSEUMS, WITH SPECIAL REFERENCE TO THE ARMY MEDICAL MUSEUM AT WASHINGTON.

BY JOHN S. BILLINGS, M.D.,
SURGEON, U. S. A.

Through the kindness of Dr. J. S. Billings, we have received an advanced copy of his Address. After some introductory paragraphs he speaks of the origin of Museums as follows:

The origin of collections of objects of natural history was possibly, as suggested by Beckman, the custom of keeping curious objects in temples; but we have no record of the formation of any collections, specially connected with anatomy or medicine before the sixteenth century. It is true that the human anatomy had been introduced into the schools by Mundinus in 1306, and that do doubt in Bologna, in Paris, and a few other places, a skeleton or two was preserved for purposes of instruction; but alcohol was unknown as a preservative before the end of the fifteenth century, anatomical details were of no interest until Vesalius had stirred up controversy with the Galenists, and injected preparations were not thought of until after Harvey's announcement, in 1628, of the discovery of the circulation of the blood.[1]

The introduction of the use of the microscope at the beginning of the seventeenth century, and the collections of preparations for use with this instrument made by Leeuwenhoek and Ruysch, gave a powerful stimulus to formations of museums of this kind. The most famous of these collections was that of Ruysch, purchased in 1717 by Peter the Great, and sent to St. Petersburg. Ruysch was practically the first to prepare injected anatomical specimens for permanent preservation, and, if the stories told of his work are true, he made preparations which have never been surpassed. His museum was a very ornamental one, the bones and skeletons being arranged in various devices, the plants in bouquets, while scattered through the whole were beautifully engrossed sentences from the Latin poets.

The most famous medical museum in the latter half of the eighteenth century was that founded by Fontana, at Florence. This still exists, filling a series of rooms, and consists mainly of wax preparations, beautiful to look at, but inaccurate, and of little scientific value.[2]

During the first half of the present century a number of private collections were formed by anatomists, pathologists and surgeons. Most of these have become public collections, either by gift or purchase, and the rest have been dispersed or destroyed. There is not in existence, at the present time, any large collection of specimens pertaining to human pathology which is the property of an individual, and is at all comparable to those made by John or William Hunter, Astley Cooper, Howship, Liston or others. Commenting on this fact, Sir James Paget writes me that he does not know of any large private pathological collection, and that he believes the change to be entirely for the better.

The necessities of modern progress in anatomy, physiology and pathology, have led to the creation of medical museums in all parts of the civilized world. In most of the Continental capitals, these are connected with universities supported by the State. In Great Britain and in this country they are, as a rule, connected with private or semi-private institutions for medical teaching. This difference is connected with the relative position which medicine holds in the educational machinery of the State in different countries. Where medical education is furnished by institutions directly supported by the government, the museums, which are a part of the apparatus required, are, of course, also supported by the government.

Through the aid of friends, whose kindness in replying, or in obtaining replies, to somewhat troublesome inquiries, I cannot sufficiently acknowledge, I have obtained certain data with regard to some of the most important medical museums now existing in the world, and a part of these data are summarized in the table before you.[3] Evidently the city having the most valuable aggregate of anatomical and pathological specimens at the present time, is London, which contains the collections of the Royal College of Surgeons, of St. Thomas', Guy's, St. Bartholomew's, St. George's and of other hospitals, and of University College, the College of Physicians and others. The oldest public anatomical museum in London is probably that of St. Bartholomew's, which, in 1826, had a room set apart for the purpose under

[1] For accounts of the collections formed between the days of King Solomon, and the end of the seventeenth century, consult tome ii of the Musei Museorum of Michael Bernhard Valentin, in folio, published at Frankfort in 1714, wherein are curious engravings of many of the wonders contained in these museums. See, also, Hagen (H. A.), The history of the origin and development of museums, American Naturalist, 1876, x, p. 80.

[2] The first use of wax models to represent pathological specimens or dissected preparations of parts of the human body is attributed to a Sicilian priest, Gaetan Jules Zambo, who lived in the latter part of the seventeenth century, and who had been accustomed to make wax models of diseased or deformed hands, feet, etc., to be used as *ex voto* offerings at the shrines of certain saints. The fame of these induced a Florentine surgeon, Ricci, to visit the priest, and to get him to model some pathological specimens which he furnished. A Franciscan, named Desrones, brought this art to France, and made many such models between the years 1703–1706, and Bianchi formed a large collection of the same kind in Italy. It was scattered after his death, and the last vestiges of it were two models representing a healthy and a diseased liver, which were to be seen in Innspruck in 1766. (Percy et Laurent, in Dict. des Sci. Méd., Paris, 1818, vol. xxxv, article "Museum.")

[3] See appendix.

the charge of John Freke, and which received the private collection of Abernethy. The most important medical museum in the world, and the one which has exercised the greatest influence in giving direction to anatomical and pathological studies, and in serving as a model for the formation of other collections, is undoubtedly that of the Royal College of Surgeons of London, the foundation of which was the collection made by John Hunter, purchased by the government in 1799. In one sense it is not a government institution, the funds from which it is now supported not coming directly from government grants; but, in another sense, it is truly such, since the College may be looked upon as the agent of the government, having special charge of matters connected with medical education, as it is the principal examining body for those proposing to practice surgery in Great Britain.

The great value of the Hunterian collection lies in the breadth of its scope, which includes every branch of medical science; but it is preëminent in illustrations of human morphology and its abnormities. The museums of the great hospital medical schools are relatively richer in the department of pathological anatomy, specimens of which they have greater facilities for obtaining. Among these there is, of course, a certain amount of duplication of matters of interest; but no two pathological specimens are precisely alike, and the question discussed in the Paris school one hundred and fifty years ago, viz: "*An pro distinctis ægris ægritudines diversæ?*" is one that often occurs to a curator as he examines new specimens which differ but little from those already in his collection, but which do differ in some respects, and with regard to which he must decide as to whether, upon the whole, they are worth the trouble and cost of preservation.

Edinburgh and Dublin have also each large and valuable collections pertaining to anatomy and medicine.[4] In Paris the medical museums are those of the Faculty of Medicine, including the Musée Dupuytren, devoted to pathological anatomy, and the Musée Orfila, devoted to human and comparative anatomy, materia medica, natural history and instruments and apparatus.

Professor Leon Le Fort, to whom I am indebted for data with regard to these collections, remarks that a large proportion of the anatomical specimens of the Orfila museum come from candidates who take part in concours opened for positions connected with the anatomical teaching of the faculty—such as prosectors, demonstrators, etc., each candidate being required to furnish from ten to thirty specimens.

[4] I am indebted to Sir James Paget for the information given with regard to the greater number of the British museums. I had originally intended to attempt to obtain such data only from four or five of the largest; but on sending my little list of questions to Sir James he took such a kindly interest in the matter as to send a copy of these queries to a number of other museums with the request that they might be answered.

The medical museums of other European countries are connected as a rule with universities, and it is to be remembered that in these the different branches of medical instruction are each both more specialized and more comprehensive than is the rule with us. The professor of anatomy, of physiology, of pathology, has each his own building or institute, and therefore, each his own museum; and unless this fact be held in view, comparisons between Continental and English, or American, medical collections may give very erroneous results.

. . . . . .

So far as mere number of specimens is concerned our own national medical collection is one of the eight largest in the world, and is increasing more rapidly than any other.

This collection, known as the Army Medical Museum, owes its inception to Dr. Wm. A. Hammond, one of whose first acts after becoming Surgeon-General, 1862, was to issue a circular stating that "as it is proposed to establish in Washington an Army Medical Museum, medical officers are directed diligently to collect and to forward to the office of the Surgeon-General, all specimens of morbid anatomy, surgical or medical, which may be regarded as valuable; together with projectiles and foreign bodies removed, and such other matters as may prove of interest in the study of military medicine and surgery."[5] By the end of the year over a thousand specimens had been collected, and the catalogue printed in 1866 showed that it contained 7716 specimens. It is not my purpose in this address to trace the history of its development; that must be done elsewhere. It has recently been placed, with the Library, in a conveniently arranged fire-proof building, and on the first of July last contained over 15,000 specimens besides those contained in its microscopical department, divided as follows:

Comparative Anatomy	1,689
Pathological	8,354
Medals	384
Microscopical specimens	10,416
Normal Human Anatomy	2,961
Instruments and Apparatus	814
Microscopes	141
Miscellaneous	835

Besides these there are 375 specimens pertaining to normal human anatomy and 726 to pathological anatomy, which are in what is called the provisional series.

It is not, however, by number of specimens that the importance and value of museums of this kind can be judged; and in this case such a comparison would give an exaggerated and erroneous idea of the value of this collection. My object in this address is not to boast of what we have, but to indicate what we want; to point out what a National Medical Museum, arranged to meet the

[5] Circular No. 2, Surgeon-General's Office, Washington, D. C., May 21, 1862.

wants and interests of this country, should be, should have, and should do, and to suggest some of the ways in which this is to be brought about.

After commenting somewhat in detail upon the ways and means for making the museum what it should be the author continues as follows:

One of the most important sections of our museum is that devoted to microscopy, including normal and pathological histology and photomicrographic work. In the cabinets there are nearly 11,000 mounted specimens, illustrating almost every field of microscopical research. Many of these were made twenty years ago and more, and were mounted by processes which have not given good results, so that Dr. Gray, who is in charge of this section, estimates that about 3,000 will be set aside as worthless; but the rest form a very valuable series to which additions are being constantly made, and materials for which we are specially anxious to obtain. In connection with this section a series of cultures of chromogenic and pathogenic bacteria is kept up for museum exhibits, and also to illustrate methods of work.

While the great majority of the specimens in a medical museum have some relation to diagnosis, prognosis, or therapeutics, the number of those which are of direct interest to the so-called practical physician is not very great. It includes models and casts illustrating dermatology, morbid growths, the results of amputations, excisions, plastic operations, etc., and instruments, apparatus, dressings, etc., of all kinds. Here also may be classed hospital fittings and furniture, means of transportation for sick and wounded, model cases of instruments, emergency chests, etc. Our medical museum has a fair beginning of a collection of this kind, including over a thousand specimens; but many more are needed to make it reasonably complete. If each medical man who devises a stethoscope, a pessary, a speculum, an ophthalmoscope, or an electro-therapeutic appliance with which he is well pleased, would send a specimen to the collection, its increase would certainly be rapid, and it could always show the latest improvement.

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The Army Medical Museum contains what may seem a large amount of material relating to human osteology, and especially craniology, in its relations to North American ethnology, or the history of the development of different varieties of man on this continent; but it is not actually half large enough to permit of drawing definite scientific conclusions from it. The majority of the crania which it contains have been measured to a certain extent, and the results have been published; but many other measurements are desirable to permit of comparison with series taken elsewhere, and even measurements already made must be repeated by later and better methods. We have been trying some experiments with composite photography and superimposed contour tracings as a means of obtaining typical outlines and dimensions for race groups of crania, and these give promise of good results. If the collections of crania of North American Indians in Boston, New York, Philadelphia and Washington could be brought together, a very much better average presentation of the majority of tribes or groups would be obtained than can be furnished by either of these collections taken separately. By composite photography and tracings, combined with uniform methods of measurement, we can practically bring these collections together, and obtain results nearly as satisfactory as if we had them all in one room. We have also fitted up one large room with instruments and apparatus for anthropometry in its widest sense, including psychophysical investigation, and it is intended to make this a complete laboratory for illustration of methods of work.

In London arrangements have been made to have such an anthropometric laboratory in an outbuilding at the South Kensington Museum. The two things have no connection, and it seems to have been placed there because it would obtain more visitors desirous of being measured and tested than if placed anywhere else. In this laboratory, which is, I believe, essentially the same sort of institution as that arranged by Mr. Francis Galton at the Health Exhibition in 1884, and is planned by Mr. Galton, any person can have the regular series of measurements and tests made upon himself for the charge of six cents. There are difficulties in the way of making a charge for such measurements in a government establishment, and there are also difficulties in undertaking to do such work gratis, chiefly on account of the cost. It is, however, so desirable that it should be done, and the data which such observations systematically carried on for a series of years would be so valuable, not only from a scientific point of view, but for practical purposes in connection with life insurance interests, and very possibly with practical medicine, that we should endeavor to overcome these difficulties in some way, and I think it can be done sufficiently, at least, to stimulate private enterprise in this direction. It is possible that we may yet see in large cities establishments of this kind, directed by skilled and reputable physicians having the confidence of the profession, where not only normal but abnormal conditions can be determined; places where the secretions can be tested chemically and microscopically, ophthalmoscopic and endoscopic examinations of all kinds made, the mode of functioning of muscles and nerves determined, and an authoritative record of the results made for the use of the individual, as evidence of his condition, or for the information of his physician. It would require an already es-

tablished reputation and much skill and tact on the part of the director of such a laboratory, with absolute refusal to give prescriptions or advice in any shape, to make it fully successful; but it may be done.

An important feature of our National Medical Museum should be to show methods of research and of instruction for the benefit of the investigators and the teachers of the country. This includes instruments and apparatus, and, to a limited extent, illustrations of the modes of using them and of the results; it also includes diagrams, models, etc., used for illustrating lectures. For example, as soon as Koch's researches became known in this country, physicians, and especially medical teachers who visited the museum, asked if we could show them the apparatus used by Koch and Pasteur in bacteriological work, and eagerly examined the few specimens of cultures on solid media which we were able to exhibit. The anatomist comes to the museum quite as much to see methods of mounting and preservation, as to see the specimens themselves; the physiologist does not expect to see function directly exhibited, but he does hope to find information about kymographs and constant temperature apparatus, and he wants to see whether Kühne's artificial eye is so useful for teaching purposes that he ought to get one to illustrate his lectures.

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The objects of a medical museum are to preserve, to diffuse and to increase knowledge. Its conservative function is to form a permanent record of what has been demonstrated, and to fix the meaning of terms. Even in my brief experience of thirty years the terminology of anatomy, physiology, pathology, chemistry and of most of the specialties has greatly changed, and this not only by addition of new terms, but by the dropping of old ones. To get useful results from the older literature we must know the precise significance of the old words, and, in some cases, the best way to learn this is to examine the specimens prepared by those who used such terms in their descriptions. The specimens in our museum which came from the collections of Professor William Gibson and Dr. Frank Hastings Hamilton are especially valuable, because they were the basis of practical teachings, and should be examined by any one criticising these teachings.

A large proportion of the pathological specimens in this museum illustrate conditions which now rarely occur, forming a group which it is safe to predict will never be duplicated. It is not only that they were gathered during a great war, but that they illustrate the results obtained when antiseptic surgery, as now understood and practiced, was unknown. Never again, I hope will there be brought together such a collection of the effects of pyogenic microörganisms on gunshot wounds, especially of bone, as may be seen in its cases.

The museum also preserves, for future investigations, objects whose nature or relations are not understood at the time when they are received, and which occur so rarely that the means of studying them by comparison can only be obtained through such preservation.

Upon the function of a museum as a diffuser of knowledge—as a means of education; it is needless to dwell. That it should also strive to increase knowledge is equally certain. This is to be effected by study and comparison of its materials. The results of such study and comparison of a part of the Army Medical Museum collection have appeared in the volumes of the *Medical and Surgical History of the War*. Another part will, I hope, soon be utilized in a study of its collection of human skeletons and crania which has been commenced by Dr. Matthews, of the Army. But a considerable part is as yet only in the stage of agglomeration, and our present business is to collect and preserve, leaving to the future its full utilization.

A medical museum is really used, for purposes of study, by very few persons; but through the teaching of those few its lessons are made known to the whole profession. American physicians in investigating a subject do not, as a rule, think of inquiring as to what museums can show with regard to it, simply because they have not had convenient access to large collections and are not accustomed to make use of them. Thirty years ago we were in much the same situation in respect to medical literature; but as the libraries have grown, desire for bibliographical research has grown also, and I think that in like manner when we have secured a comprehensive National Medical Museum, it will not only be made use of, but will give a powerful stimulus to the formation and progress of other more special collections elsewhere.

What should be the relation of this central National collection to those formed in different parts of the country, either in connection with medical schools, or with museums of broader scope? Certainly they should help one another, and this can be done in many ways. I do not in the least object to a generous rivalry to do the best work, to have the most instructive and artistic preparations. That is a good thing. But I would say to the anatomist of a school, when you have made a preparation which is noteworthy, offer to make a copy for the National collection, where it will be seen by the anatomists of all schools and all countries. To the pathologist of a medical school I would say, after you have secured type specimens for your own collection put aside other good specimens for the National Medical Museum, which will furnish you materials for the purpose.

On the other hand, the collections of the National Museum are available for study by any proper person, and its duplicates should be used to aid other museums which may be in special need of them.

In common with several of the largest and most important medical museums, more especially those of the Royal College of Surgeons and of the Faculty of Medicine of Paris, the Army Medical Museum has the advantage of being closely associated with a large medical library which is in the same building, and at present under the same direction. The increased utility and attractiveness which this gives to both library and museum is very decided.

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I have time for only a very condensed statement of the wants of our National Medical Museum. In the first place it needs the intelligent interest and friendship of the medical profession of this country. To a very considerable extent it has had this; were it otherwise it would not be what it is, nor where it is. But it needs more of it, and it can never have too much. Every medical man in this country should help a little and provide for the perpetuation of his name as that of a physician interested in the progress of the profession by sending at least one specimen to it. It is omnivorous in its demands for material, as will be seen by the circular which it has recently issued. But I will name as special wants, human embryos, especially those of a very early age, monstrosities and malformations of all kinds in man or in the lower animals; results of old injuries, such as fractures or dislocations, or of surgical operations, such as excisions, stumps, etc.; injuries and diseases of the eye, ear and nose; new growths of all kinds; diseases of the brain and spinal cord; and specimens illustrating the condition of bones, joints, brain, larynx and other organs in extreme old age.

In the second place it needs a regular supply of funds from the general government. To form and keep in proper condition such a medical museum as this should be is a more difficult and expensive matter than those not acquainted with such work would suppose, and the gifts of specimens from the profession must be supplemented by ample means for the preparation, preservation and proper display of these specimens, and also for the purchase of apparatus and typical specimens of foreign work, in order that the museum may be always able to show the latest state of knowledge and the best ways of doing things.

The annual appropriation for the Museum at present is $5000. This is sufficient, except that the printing of the catalogue, of which I shall speak presently, must be an extra charge. . . . .

The third need of the Museum is a series of the right kind of descriptions of its specimens, given on labels and in a catalogue. Unaided by such descriptions it has for each man that which he can see in it, and no more. One man will see nothing but an old piece of bone, a shapeless mass of tissue bleached by alcohol, a case of old dingy brass instruments. Another will see in the same things a rare joint atrophy, implying curious abnormal nerve influence; a leprous nodule, whose history, if we knew it, would reach back through the lazar-houses of the middle ages to the far East, and whose bacilli may be the lineal descendants of those that vexed Naaman the Syrian; a case of microscopes illustrating the development of that instrument, from the first rough iron tube of the spectacle-maker of Nuremberg to the delicate and complicated instrument through which we now peer curiously into that world which lies within the world of unassisted vision. By our labors and catalogues we must tell men what to see; but to do this we must first see ourselves. The aphorism that a first-class museum would consist of a series of satisfactory labels with specimens attached, means a good deal. Something has been done in this direction, as you will see on inspection of the cases; but I often wonder what sort of labels a man who has spent years in investigating the normal and abnormal structure and relations of one organ, would write for our specimen of that organ. Such help as this we need; kindly, truthful criticism, the pointing out of errors and of new points of view for this mass of material.

We also need a series of printed catalogues. One of these should be in the form of compact handbooks relating to particular sections of the collection, and intended partly for the use of visitors while in the museum and partly as a ready means of letting distant friends know what material it most needs in different departments. It should also print a complete illustrated catalogue of the whole collection for the use of the investigators and teachers of the profession. Congress has been requested to grant authority for the printing of such a catalogue by the Government Printer. The material for it is nearly ready, and it would make three volumes, each the size of one of the volumes of *The Medical and Surgical History of the War of the Rebellion*.

Our museum, like the library with which it is associated, includes all the specialties. No physician is so learned or skilful that he can find no instruction there, and no one is so ignorant that he cannot comprehend some of the lessons which it teaches. Taken together these institutions should contribute in no small degree to our National prestige, for which eminence in scientific work and teaching is an essential element, and if it be remembered that they are only twenty-five years old, and that during that period we have been making medical history at a tremendous rate, surely some incompleteness and crudeness may well be excused or overlooked.

Speaking in behalf of the Army Medical Department, and for the dead as well as for the living who have been charged with this work, I can truly say that we have been very proud of our charge, and that we have done our best, each according to his capacity and opportunity, to make the museum and library such as a great profession and a great nation have a right to demand.

Appended to the address are tables enumerating the principal medical museums both in Europe and this country. We have only space for the table giving those in the United States, as follows:

Locality and Name of Museum.	Total number of specimens.	Number of Specimens in each Department.					Number of specimens added during last five years.	Am't expended during last five years.
		Comparative anatomy.	Normal human anatomy.	Embryology.	Pathological anatomy.	Materia medica.		
Albany: Medical College Museum	5500	250	1250	200	3100	700	770	$660
Boston: Warren Anatomical Museum, Harvard University	7900	. .	. .	. .	. .	. .	470	8973
Chicago: Chicago Medical College Museum	1332	122	300	10	200	700	. .	. .
Rush Medical College Museum	850	70	100	50	100	200	. .	. .
Cincinnati: Miami College Museum	3078	450	603	75	823	1002	. .	. .
Museum of Hospital and Pathological Dep't of Cincinnati University	1250	. .	. .	. .	1250	. .	. .	889
Louisville: Medical Department University of Louisville Museum	1992	276	275	127	868	446	. .	2250
New Orleans: Museum of Tulane University	2500	. .	. .	. .	. .	. .	. .	500
New York: Pathological Cabinet of N. Y. Hospital	2366	. .	. .	. .	2366	. .	542	14,028
Museum of Medical Dep't University of New York	8000	1000	4000	500	2500	. .	50	7250
Wood Museum, Bellevue Hospital	2224	256	282	69	1613	. .	. .	. .
Philadelphia: Mütter Museum, College of Physicians	3700	296	242	140	3000	. .	. .	. .
Wistar and Horner Museum, University of Penna	7458	919	1355	292	2717	2175	. .	2950
Jefferson College Museum	2500	. .	. .	. .	. .	. .	1000	. .
Washington: Army Medical Museum	14,360	1685	2853	108	8354	814	3789	23,356

FOREIGN CORRESPONDENCE.

LETTER FROM LONDON.

(FROM AN OCCASIONAL CORRSPONDENT.)

Dr. William Murrell's Work on Chronic Bronchitis—Medical Advertising in London—Report on the late Emperor Frederick's Case—The next Congress at Washington and Medical Honors—The Father of the American Medical Association.

Dr. William Murrell, of the Westminster Hospital, London, is engaged in the preparation of a work on chronic bronchitis and its treatment, a complaint which is very prevalent here, and to which the Doctor has paid much attention, He is still a firm believer in the efficacy of ipecacuanha spray introduced by him and Prof. Ringer, in 1874. The ordinary ipecacuanha wine is used, either pure or variously diluted, according to the severity of the symptoms. The inhalation is performed once or twice a day and its duration rarely exceeds twenty minutes. The apparatus employed is a common hand-ball spray, or one worked by steam, which is a modification of Siegle's. Certain precautions are taken, which although apparently trivial, are not without importance in the attainment of a successful result. The patient is taught to inspire deeply so as to bring the spray in direct contact with the irritated mucous membrane of the bronchial tubes. If he should exhibit a tendency to involuntarily arch his tongue up against the roof of the mouth he is told to protrude it so as not to obstruct the entrance of the atomized fluid into the air passages. Any fluid which may accumulate in the mouth he is directed to spit out as it is found by experience that if swallowed it is apt to give rise to nausea, and even vomiting. A course of treatment lasts from three weeks to a month, and even if the patient is not permanently cured he is usually relieved of his cough, the shortness of breath and other distressing symptoms soon disappear. In very obstinate cases Dr. Murrell employs in addition "Burroughs' Chloride of Ammonium Inhaler," a little acetic acid colored with tincture of litmus being added to the water in the wash bottle, to cut off any free ammonia and prevent the occurrence of spasmodic cough and bronchial irritation, which when this is neglected is sometimes caused. In suitable cases certain essential oils dropped on absorbent cotton-wool are added to the water and are volatilized with the fumes. The drugs best adapted for this purpose are pure terebine, pinol, oil of sandal-wood, oil of lemon, and oil of cubebs. Care is taken in the selection of the appropriate remedy, and it is found that the character of the expectoration is the best guide. Tar is the best drug for internal use, and is given in the form of syrup of tar, mixed with an equal quantity of syrup of Virginia prune. It is palatable and may be taken in doses of a tablespoonful in water several times a day, in fact, the oftener the better. When the expectoration is difficult it is an advantage to add to each dose five drops of a 1 in 50 solution of hydrochlorate of apomorphine, which although in large doses an emetic, acts in small doses as an excellent expectorant. Dr. Murrell speaks favorably of the "Aromatic Oil of Tar" sold in the

United States, and finds that, as a rule, patients take it well, and like it. He says that he believes it is a solution of wood tar in rum flavored with treacle. He has recently been investigating the composition of several patent medicines, and finds that "Spirone" is a 2 per cent. solution of iodide of potassium mixed with glycerine and acetone. It may be used as a spray in chronic bronchitis and bronchitic asthma. When the asthmatic symptoms predominate, Dr. Murrell employs fuming preparations, giving the preference to nitre papers made of very thick blotting-paper saturated with equal parts of chlorate and nitrate of potassium and sprinkled when dry with Friar's balsam, essence of camphor, tincture of stramonium, or tincture of sennbal. The addition of a little iodide of potassium, as in the "ozone papers," is useful. Sometimes various forms of incense are employed, the following being the favorite formula: Powdered nitre, one ounce; powdered anise fruit, one ounce; and powdered stramonium leaves, two ounces. This may be improved in suitable cases by the addition of two ounces of sumbal root, or two ounces of powdered benzoin. Cubeb cigarettes, or cigarettes made of grindelia robusta, or Hunrod's powder, mixed with Turkish tobacco, are useful and often prescribed. Dr. Murrell is also engaged in preparing a fourth edition of his work on "Massage as a Mode of Treatment."

Some days ago in passing a news stand my attention was attracted to a paper known as the "Family Doctor." Having plenty of leisure time time to read, I purchased the people's medical adviser, but was startled on opening the periodical to find a good wood cut of Dr. William Miller Ord, of London, occupying the front page. Accompanying the picture of this medical gentleman was a clever but adroit sketch of Dr. Ord's life, given very minutely, even including his office location and all his movements but one. The medical man who wrote this article—and it was evidently written by one well informed in medical matters, or perhaps dictated by the doctor himself—omitted to state that Dr. Ord was in Washington during the late meeting of the Ninth International Medical Congress, but out of purely personal reasons did not attend the meeting. I have since been creditably informed that the College of Physicians, of which Dr. Ord is a member, have under consideration the investigation of this recent method of medical advertising.

Sir Morell Mackenzie, the eminent physician of the late Emperor Frederick of Germany, is preparing an official report in detail of his case, which will shortly appear here in book form. The work will only cover one hundred pages, and Sir Morell Mackenzie is to receive from his publishers the enormous sum of fifteen hundred pounds for his contribution. Seven thousand five hundred dollars, or fifteen hundred pounds, is said to be the largest sum of money which has ever been paid by a publishing house to a medical man for any contribution.

The meeting this month, in Washington, of the Congress of American Physicians and Surgeons, has made little or no impression upon the mass of medical men throughout Europe. Now and then I have heard reference made to the meeting in a kindly manner in this and other medical centres. A very large number of eminent members of the profession in all parts of Europe have been invited, and even urged, to attend, and but few, very few, will be at the meeting, even though, I am told, suggestions have been made to many that possibly American degrees may be conferred upon many who will honor them by their presence. Unfortunately for the present managers of the Congress, the part they have taken during the past year against their own countrymen has now become more apparent here, and the reaction has been anything but favorable to them and their meeting. The suggestion, or even the promise, of degrees to be given out, which is whispered around here, may induce a few to attend the meeting, but the very many invited will stay at home.

I cannot close this brief letter without making reference to the second visit to the late meeting of the British Medical Association, of the Father of the American Medical Association. Dr. Davis was received not only warmly, but enthusiastically, and all honor was shown the late President of the Ninth International Medical Congress.

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DOMESTIC CORRESPONDENCE.

Criminal Abortion and State Laws.

Dear Sir:—I notice in THE JOURNAL of Sept. 1, 1888, that you say in your able and instructive editorial on "The Ethics of Marriage," that "New Mexico, New Jersey, South Carolina, Texas and the District of Columbia have no laws relating to the punishment of attempts to perform abortion." As to the other States, I have nothing to say; but New Jersey in this, as well as other important matters of protection of the health of her inhabitants, is not behind any of her sister States in regard to the stringency of her laws, and he who violates in this, as the records of our courts show, gets a taste of "Jersey justice." In support of the above I send you a section from our criminal code, viz:

Section 27. "That if any person maliciously or without lawful jurisdiction, with intent to cause and procure the miscarriage of a woman then pregnant with child, shall administer to her, prescribe for her, or advise or direct her to take or swallow any poison, drug or medicine or noxious

thing, and if any person or persons maliciously and without lawful justification shall use any instrument or means whatever with the like intent, he shall, on conviction thereof, be adjudged guilty of a high misdemeanor; and if the woman or child die in consequence thereof, shall be punished by fine not exceeding *five thousand* dollars, or imprisonment at hard labor for a term not exceeding fifteen years, or both, at the discretion of the court. And in case the woman or child do not die in consequence thereof, such offender shall be adjudged guilty of a misdemeanor, and be punished by fine not exceeding one thousand dollars, or imprisonment at hard labor for a term not exceeding five years, or both, in the discretion of the court before whom such conviction shall be had."

And on this law there have been several decisions; we will name but two, to show how the courts regard it.

First. "A woman who voluntarily takes a potion administered to her for the purpose of causing an abortion, is not an accomplice in the crime of the person administering it, the law making it no crime in her to take the potion." And,

Second. "The thing administered must be noxious in its nature, but it is not necessary to prove it will produce miscarriage; the crime is complete, whether in the opinion of others it is capable of producing that result or not."

Thus you see, Mr. Editor, that New Jersey is not one of the States that *winks* at that too frequent crime, and one that some of our profession at times yield to at the appeals of the unfortunate. Hoping that in justice to the fame of our State you will give the above a place in THE JOURNAL, I am, Yours truly,

D. B. INGERSOLL, M.D.

May's Landing, N. J., Sept. 10, 1888.

The Report of the Medical Examining Board of Virginia.

Dear Sir:—Your editorial in the issue of September 8, on the Report of the Medical Examining Board of Virginia, should be widely read and deeply pondered. To the schools such a report is as the handwriting on the wall, "Mene, mene, tekel, upharsin;" to the profession of every State an encouragement to persevere in the good work of organizing Medical Boards.

It is not a function of the University to grant the license to practice. That the M.D. degree carries this privilege is a modern usurpation, which does not extend to degrees in other faculties. It is a function of the State, to be exercised either directly, as is done in Germany, or indirectly, by the profession organizing and appointing suitable examiners. The struggle is between the colleges and the profession, and I would refer any one who may feel doubtful as to the issue of the fight, to an address which I delivered in 1885, when President of the Canada Medical Association (*Med. News*, 1885, ii), in which I sketched the organization of the profession in the Provinces of Ontario and Quebec, which led, in the former Province, to the complete subjugation of the schools.

You may be surprised, Sir, at these sentiments from a dyed-in-the-wool school-man, but I feel convinced that the future of medical education in this country lies largely in the establishment of State Boards, such as exist in Virginia and North Carolina, which shall (1) control the entrance examination, (2) regulate the curriculum, and (3) grant the license to practice.

Yours very truly,

WILLIAM OSLER, M.D.

1502 Walnut St., Philadelphia.

"The Ethics of Marriage."

Dear Sir:—In your editorial notice of "Ethics of Marriage," by Dr. H. S. Pomeroy, in issue of Sept. 1, you refer to "Dr. Pomeroy's illustration of plucking unripe and ripe fruit from the tree." As the illustration is as ancient as it is striking, I take the liberty of sending it as originally stated by Dr. Percival Willughby, in 1670. In a work of this date witten for midwives, he says: "Let midwives observe the waies and proceedings of nature for the production of her fruit on trees, or the ripening of walnutts and almondes from theire first knitting to the opening of the huskes and falling of the nutt; the greene huskes sticking so close that it is not possible to separate the huske from the shell, whilst it is unripe; but as the fruit ripenneth the huske choppeth, and with a fissure openeth, and by degrees separateth the fruit without any enforcement." This quotation, with others from the same author, will be found in the preface of "Denman's Practice of Midwifery," 1821. Respectfully,

HUNTER H. ROWELL, M.D.

467 Prospect St., Cleveland, O., Sept. 11, 1888.

BOOK REVIEWS.

PROCEEDINGS AND ADDRESS AT A SANITARY CONVENTION held at Albion, Michigan, Dec. 6 and 7, 1887, under the direction of a Committee of the State Board of Health and a Committee of Citizens of Albion. Reprint No. 274. Lansing: 1888.

This pamphlet of 70 pages is interesting as showing what kind of papers are read at the Sanitary Conventions for which Michigan is becoming somewhat famous. Sanitary conventions teach the people what sanitation is, and show sanitary and health authorities to what extent and in

what way the public is interested in sanitary matters.

In the pamphlet before us are a number of addresses, papers and discussions, by medical and laymen. Some deal with local matters—the sanitary state and needs of Albion. This discussion of particular cases and local matters is an important point in teaching sanitary matters to the people. There are also papers and addresses on special subjects of general interest, such as "Nuisances: What they are and how to prevent them," by R. A. Martin, M.D.; "Diseases incident to the Poor," by Dr. A. G. Bruce. "School Hygiene," by Hettie Warner Bradley; "Money Value of Sanitary Work," by Rev. B. A. Brown, M.D.; "Prevention of Communicable Diseases, from the Standpoint of the Health Officer," by H. D. Thompson, M.D.; "Prevention of Communicable Diseases, from the Standpoint of the Clergy," by Rev. B. S. Taylor, M.D.; the same from the standpoint of the Lawyer, by R. Loud; the same, from the standpoint of the State Board of Health, by Dr. Henry B. Baker.

If one wishes "good literature" for the people, it can be had from the Michigan State Board of Health.

We omitted to mention the address of the President of the Convention, Rev. Z. R. Fiske, D.D., LL.D., on "Sanitation from the Standpoint of the Individual—Sanitation from the Standpoint of the State."

HYGIENE FOR BASE BALL PLAYERS. Being a brief Consideration of the Body as a Mechanism; the Art and Science of Curve Pitching; a discussion of the Causes and Treatment of the Disabilities of Players, etc. By A. H. P. LEUF, M.D., Director of Physical Education at the University of Pennsylvania and at Swarthmore College, etc. Small 8vo, paper, pages 135. Philadelphia: A. J. Reach & Co. 1888. Chicago: W. T. Keener.

Dr. Leuf is the only medical man, so far as we know, that has given any special attention to the injuries of base ball players, and what he writes is all the more valuable because he himself is an expert player. He is, we believe, one of the good curve pitchers in the country, has suffered from pitcher's sore arm, and can therefore write more intelligently of it. In America base ball has become an acknowledged occupation, and has its own special injuries and medical features. Physicians will be interested in Dr. Leuf's description and explanation of curve pitching.

A PHARMACY LAW FOR LOUISIANA.—The efforts of the pharmacists of Louisiana to secure a law in their State to regulate the practice of pharmacy have finally been successful. The last Legislature passed an act which was approved July 11, and will be in force as soon as the necessary machinery is provided.

MISCELLANEOUS.

NEW YORK STATE MEDICAL ASSOCIATION. — Programme of the Proceedings of the Fifth Annual Meeting, held at the Hotel Brunswick, Fifth Ave. and 27th St.

FIRST DAY—OCTOBER 9, 1888. MORNING SESSION, 9 O'CLOCK. ORDER OF BUSINESS.

I. Calling the meeting to order.
II. Announcement by the Secretary of the number of attendants from each district.
III. Report of the Committee of Arrangements.
IV. Address by the President.
V. Annual Report of the Council.
VI. Annual Report of the Treasurer.
VII. Reports of special committees.
VIII. Unfinished business.
IX. New business.
A. Annual Reports of the Presidents of Branch Associations, in their numerical order, to be read by title.
B. Annual Report of the President of the New York County Medical Association, to be read by title.

"A Case of Anæsthesia by the Inhalation of Nitrous Oxide, supposed to be the first on record," by Oliver P. Hubbard, M.D., of New York Co.

"Forced Respiration: History, Apparatus, Report of six (or more) cases. Effects of, on narcotized human subjects, adaptability of, in cases of drowning or shock," by George E. Fell, M.D., of Erie Co.

"The Origin and Medical Treatment of Uric Acid Calculi of the Kidney," by William D. Garlock, M.D., of Herkimer Co.

"Railway Injuries," by Charles W. Brown, M.D., of Chemung Co.

X. Announcement by the presiding officer that the Fellows from the different districts shall appoint two members of the Nominating Committee from each district.
XI. Appointment by the President of a member at large of the Nominating Committee.
XII. Reading and adoption of the minutes of the session.
XIII. Adjournment of the session at 12:30. During this recess of half an hour, the Fellows from the different districts shall meet to appoint the two members of the Nominating Committee from each district.

AFTERNOON SESSION, 1 O'CLOCK. DISCUSSION ON NOSOGRAPHY.

This discussion will be opened by Alfred L. Carroll, M.D., of Richmond County, with a paper in which he propounds the following questions:

Question 1. What general principles should govern classification and nomenclature, irrespective of their particularization in medicine?

This question will be discussed by M. L. Britton, Ph.D., of New York Co., and by Simeon T. Clark, M.D., of Niagara Co.

Question 2. What are the advantages of a nosographical system based upon anatomy?

This question will be discussed by Edward G. Janeway, M.D., of New York Co., and by Frank W. Ross, M.D., of Chemung Co.

Question 3. Does a nosography based upon anatomy afford satisfactory means for the registration of clinical phenomena?

This question will be discussed by E. D. Ferguson, M.D., of Rensselaer Co., by H. D. Didama, M.D., of Onondaga Co., and by Charles G. Stockton, M.D., of Erie Co.

Question 4. What place in nosography should be assigned to bacteria, ptomaines, leucomaines, and "extrac-

tives" respectively; [a] from a bio-chemical, [b] from a clinical point of view?

This question will be discussed by Elwyn Waller, Ph.D., of New York Co., by Charles A. Doremus, M.D., of New York Co., and by Nelson B. deS. Sizer, M.D., of Kings Co.

NIGHT SESSION, 7:30 O'CLOCK.

"Hiccough, with Notes on Treatment," by Frederick W. Putnam, M.D., of Broome Co.

"Diphtheritic Paralysis." "The Treatment of Diphtheria," by J. Lewis Smith, M.D., of New York Co.

"A Case of supposed Partial Twist of the Intestines," by George E. McDonald, M.D., of Schenectady Co.

"A New Treatment of Pneumonia," by Godfrey R. Martine, M.D., of Warren Co.

"Rheumatoid Arthritis." by E. J. Chapin Minard, M.D., of Kings Co.

"The Use and Abuse of the Forceps in Obstetrics," by John P. Garrish, M.D., of New York Co.

SECOND DAY—MORNING SESSION, 9 O'CLOCK.

Address on Surgery, by William H. Carmalt, M.D., of Connecticut.

"Ocular Palsies," by Alvin A. Hubbell, M.D., of Erie Co.

"Heredity in certain Classes of Cases of Chronic Diffuse Nephritis," by B. A. Church, M.D., of Otsego Co.

AFTERNOON SESSION, 1 O'CLOCK.

Discussion on Tumors. General consideration of Tumors from a surgical point of view.

This discussion will be opened by John W. S. Gouley, M.D., of New York County, with a paper propounding the following questions:

Question 1. What are neoplasmata, and what are the characters which differentiate them from blastomata, and these from inflammatory processes?

Question 2. What are the advantages of naming and arranging the neoplasmata in accordance with their histogenesis?

Question 3. What is the value of the anatomical basis to the clinician when the question of malignity arises?

Question 4. What are the objections to the grouping of neoplasmata in accordance with benignity and malignity?

These questions will be discussed by Hermann M. Biggs, M.D., of New York Co.

Question 5. What constitutes malignity, histologically and clinically?

Question 6. What is the mechanism of the necrotic process which so often occurs in certain neoplasmata?

These questions will be discussed by Charles B. Nancrede, M.D., of Pennsylvania, who will also discuss Questions 4 and 13, and by Nathan Jacobson, M.D., of Onondaga Co., who will also discuss Question 13.

Question 7. What is the *rationale* of the recurrence of excised neoplasmata in distant parts or in the viscera?

Question 8. What is the explanation of the tendency in certain neoplasmata to involve secondarily neighboring lymphatic ganglia?

These questions will be discussed by Joseph D. Bryant, M.D , of New York Co., who will also discuss Question 13, by Uri C. Lynde, M.D., of Erie Co., who will also discuss Question 13, and by Leroy J. Brooks, M.D., of Chenango Co., who will also discuss Question 13.

Question 9. What therapeutic deductions are to be drawn from the analysis of the genesis and history of a given neoplasma?

Question 10. What are the indications and contraindications of the excision of neoplasmata?

These questions will be discussed by Frederic S. Dennis, M.D., of New York Co., who will also discuss Question 13.

Question 11. What is the average duration of life from the time of the appearance of a malignant neoplasma which has not been treated?

Question 12. To what extent does the excision of malignant neoplasmata prolong life?

These questions will be discussed by William T. Bull, M.D., of New York Co., who will also discuss Question 13, by Charles W. Browne, M.D., of Chemung Co., who will also discuss Question 13, and by E. M. Moore, M.D., of Monroe Co., who will also discuss Question 13.

Question 13. Are malignant neoplasmata ever cured?

This question will be discussed by Charles T. Parkes, M.D., of Illinois, who will also discuss Question 12, by William H. Carmalt, M.D., of Connecticut, by Stephen Smith, M.D., of New York Co., and by William S. Tremaine, M.D., of Erie Co., who will also discuss Questions 10 and 12.

NIGHT SESSION, 7:30 O'CLOCK.

Discussion on Tumors, continued.

THIRD DAY, OCTOBER 11—MORNING SESSION, 9 O'CLOCK.

Address on Medicine. "Medical New York in 1880," by John Shrady, M.D., of New York Co.

"Mechanism of Posthumous or Post-mortem Inversion of the Uterus," by Isaac E. Taylor, M.D., of New York Co.

Address on Obstetrics, by George Tucker Harrison, M.D., of New York Co.

AFTERNOON SESSION, 1 O'CLOCK.

Discussion on Puerperal Septicæmia.

This discussion will be opened by Carlton C. Frederick, M.D., of Erie Co., with a paper in which the following questions are propounded:

Question 1. What facts can be cited in support of the doctrine that the puerperal febrile diseases owe their origin to the action of microörganisms?

This question will be discussed by Hermann M. Biggs, M.D., of New York Co.

Question 2. Is there a specific febrile disease peculiar to the puerperal woman, or are the various forms of puerperal fever the result of septic or putrid infection similar to or identical with that familiar to surgeons as septicæmia? What etiological relations exist between the zymotic diseases and some forms of puerperal febrile diseases, and in what manner are the zymotics modified by implantation upon the puerperal state?

These questions will be discussed by Everard D. Ferguson, M.D., of Rensselaer Co., and by S. B. Wylie McLeod, M.D., of New York Co.

Question 3. What conditions of the woman predispose to the development of puerperal septicæmia? To what extent are the accidents of childbirth, together with the manipulations of the accoucheur, to be considered as etiological factors in puerperal infection? Are there any antiseptic measures before, at, or after labor, under any and all conditions and complications, that may be relied upon as prophylactic to puerperal septicæmia?

These questions will be discussed by Frank W. Ross, M.D., of Chemung Co., and John Shrady, M.D., of New York Co.

Question 4. Are the lesions resulting from puerperal infection always the same? If various lesions result, can an accurate differential diagnosis be made between them, based alone upon the history and symptoms?

These questions will be discussed by William H. Robb, M.D., of Montgomery Co.

Question 5. What is the pathology of each of the several forms of puerperal septicæmia? What conditions or circumstances incident to puerperal septicæmia, and what forms of the disease, tend to render it fatal?

These questions will be discussed by Frank Grauer, M.D., of New York Co.

Question 6. What plan of antiseptic treatment can be employed with a large degree of success in each of the several forms of the disease? Does every rise of temperature above 100° F. in the puerperal woman constitute an indication for immediate resort to irrigation? When should irrigation be intra-vaginal, and when intra-uterine?

When irrigation is employed, how often should it be done, and when should it be discontinued? What hygienic, medicinal, and dietetic treatment is to be used, in addition to the local antiseptic measures? To what extent should alcoholic stimulants and anti-pyretics be used?

These questions will be discussed by William T. Lusk, M.D., of New York Co., and Rollin L. Banta, M.D., of Erie Co.

Question 7. What sequelæ of puerperal septicæmia tend to impair the subsequent health of the woman in case of her recovery? To what extent do chronic diseases of the pelvic organs owe their origin to puerperal septicæmia?

These questions will be discussed by John G. Orton, M.D., of Broome Co.

NIGHT SESSION, 7:30 O'CLOCK.

Discussion on Puerperal Septicæmia, continued.

OFFICERS AND COMMITTEE OF ARRANGEMENTS.

John Cronyn, President, E. D. Ferguson, Secretary, *Ex-officio Members of the Committee.*

Glover C. Arnold, Chairman.

C. Ellery Denison, Secretary.

E. S. F. Arnold, Alfred L. Carroll, John W. S. Gouley, Frank Grauer, John H. Hinton, Charles A. Leale, J. R. MacGregor, S. B. Wylie McLeod, Augustus D. Ruggles, John Shrady, E. H. Squibb, Isaac E. Taylor, John G. Truax, William T. White.

A STEP NEARER.—We learn that at the last meeting of the American Medical Association, an amendment to the constitution of that body was presented providing for the formation of a Section on Pharmacy and Materia Medica. The proposed amendment provides that the Section shall be organized in the same manner as the recently established Dental Section, and that reputable pharmacists may be sent as delegates by the various State pharmaceutical associations. Under the rules, the amendment lies over for action at the next annual meeting.

Our readers will remember the plea made for this movement by Dr. Cutter, and the supposed difficulties of its accomplishment, which were discussed in our columns soon after the appearance of the doctor's proposal. Notwithstanding the supposed ethical complication which was mentioned in this discussion, we hear that the prospects of the establishment of such a Section are good; if the physicians are really desirous of effecting a union with their pharmaceutical brethren, they will find a way of overcoming any such difficulties.

We hope to see the step now taken result, in due time, in establishing a relation between the two professions which cannot fail to be beneficial to both.—*The Druggists Circular and Chemical Gazette*, September, 1888.

SECRETARIES OF STATE MEDICAL SOCIETIES, prominent district and city societies, that wish to exchange, or are now exchanging their publications with those of the Nebraska State Medical Society, are asked to notify the Secretary, Dr. A. S. v. Mansfelde, Ashland, Neb., when the "Omaha Clinic," containing the proceedings of the Society, will be promptly mailed to them.

REMARKABLE FECUNDITY.—Mrs. Norman, the wife of a painter living at Fratton, Portsmouth, is reported to have given birth to four children—three boys and a girl—of whom only the girl survives. Mrs. Norman, who is about 40 years of age, is said to be the mother of twenty-one children, of whom nine are living. She had previously had twins, and seven years ago triplets.—*British Med. Jour.*

MR. CHARLES TRUAX, of the well-known surgical instrument house at Chicago, was granted sufficient time at the recent meeting of the British Medical Association to enable him to explain the merits of the Allen Surgical Pump.

THE RIGI BRAND OF CONDENSED MILK has been condemned by the Board of Health, New York City, on an official analysis showing a deficiency of from 5 to 9 per cent. of fat as compared with pure condensed milk; and all of said brand found in the city has been ordered to be seized.—*Boston Journal of Health*, Sept., 1888.

Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department U. S. Army, from September 8, 1888, to September 14, 1888.

Col. Charles Page, Asst. Surgeon-General, Medical Director of the Department, will proceed to Fts. Riley and Hays, Kansas, Post near Denver and Fts. Crawford, Lewis and Lyon, Col., and return, on public business. The travel enjoined is necessary for the public service. Hdqrs. Dept. of the Missouri, Ft. Leavenworth, Kan., September 7, 1888. S. O. 114.

Lt.-Col. Basil Norris, Medical Director, will proceed to Ft. Klamath, inspect the medical department at that post, and upon completion thereof return to these Headquarters. Hdqrs. Dept. of the Columbia, Vancouver Bks., W. T. S. O. 103, September 3, 1888.

Major Daniel G. Caldwell, Surgeon, is granted two months' leave of absence from September 14, 1888. S. O. 40, A. G. O., September 10, 1888.

Capt. Fred. C. Ainsworth, Asst. Surgeon. will, by direction of the Secretary of War, proceed to Kennebec Arsenal, Augusta, Me., on public business connected with the Medical Department of the Army. On completion thereof will return to his station in this city, Washington, D. C. S O. 211, A. G. O., September 11, 1888.

Capt. John M. Banister, Asst. Surgeon U. S. Army, is granted two months' leave of absence, with permission to apply for an extension of one month, to take effect when his services can be spared. S. O. 211, A. G. O., September 10, 1888.

Capt. Norton Strong, Asst. Surgeon, by direction of the acting Secretary of War, will report in person, at 11 o'clock A.M., October 18, 1888, to Brig.-Gen. John R. Brooke, President of the Retiring Board in session at Omaha, Neb., to give testimony in a case pending before the Board. Upon completion of this duty he will return to his proper station. Par. 9, S. O. 212, A. G. O., September 12, 1888.

First Lieut. Nathan S. Jarvis, Asst. Surgeon, is granted one month's extension of leave of absence, on surgeon's certificate of disability. S. O. 210, A. G. O., September 10, 1888.

Official List of Changes of Stations and Duties of Medical Officers of the U. S. Marine Hospital Service, for the Two Weeks Ending September 10, 1888.

Surgeon George Purviance, to proceed to Fairport, O., as Inspector. August 27, 1888.

Surgeon R. D. Murray, to proceed to Key West, Fla., September 5, 1888.

Surgeon W. H. H. Hutton, to take temporary command of Camp Perry, Fla. September 8, 1888.

P. A. Surgeon John Guitéras, to proceed to Jacksonville, Fla., after return from duty, on special train from Jacksonville to Hendersonville, N. C. September 8, 1888.

P. A. Surgeon W. D. Bratton, to proceed to San Francisco, Cal., and report to Surgeon H. W. Sawtelle for duty. September 8, 1888.

P. A. Surgeon Eugene Wasdin, to rejoin his station at Mobile, Ala. September 5, 1888.

Asst. Surgeon G. M. Magruder, to proceed to Mobile, Ala., and assume temporary charge of the Service. August 31, 1888.

Asst. Surgeon J. B. Fattic, to proceed to Memphis, Tenn., and relieve P. A. Surgeon C. T. Peckham. August 31, 1888.

Asst. Surgeon G. M. Magruder, to proceed to Way Cross, Ga. September 6, 1888.